

# BULLETIN

## OF THE

# MISSOURI STATE BOARD OF HEALTH

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NO. 1

### TYPHOID FEVER IN KANSAS CITY.

#### For the Year Ending July 1st, 1904.

The infectious character of typhoid fever, its cause and incubation period, together with radical methods of experimentation, have received official recognition at the hands of the municipality. The experiments have not been made upon guinea pigs or other supposedly susceptible animals, but upon the populace of the city.

In furtherance of this experiment, in June, 1903, the water system of the city was pumped full of raw sewage from the overflowed vicinity of the Turkey Creek pumping station. The entire public water supply was frightfully polluted. This was kept up until there was no possibility of any part of the system remaining without infection, so that the experiment would be far reaching, and all classes and conditions of the population of the city be subjected to the test. People who would not use the city water in this condition, who thought more of their own health and safety, than of the scientific value of the experiment, were driven to various emergency supplies such as could be found in springs, wells and cisterns. Because of a dependence on the public supply, many of these had not been used or cleaned for years. Many of them were polluted, and the results were a definite means of discovering which were polluted and which remained pure, without the trouble or expense to the city of a chemical and bacteriological examination.

In apt recognition of the inevitable result of the pollution of the water supply in June, and with a view to accurate and statistical information, a physician in the City Council introduced, and the Council passed in July, ordinance No. 23156, requiring physicians who should thereafter treat cases of typhoid fever to report the same to the Board of Health, declaring failure so to do to be a misdemeanor punishable by a fine of from ten to fifty dollars. This ordinance was published as required by law, and by the tenth day



of July the reports of cases began to accumulate in the office of the Board of Health. As the name and address of the patient and the name of the physician were given, it was a matter of little difficulty for the inspectors, by the use of the telephone, to ascertain the probable cause. This last was an important matter, as the weather was very warm and physical effort very exhausting to public officials. If the patient used city water, it was a vindication of the experiment; if the water used was from a well, cistern, or spring, its condition was determined without the trouble and expense of investigation. Some milk routes were also well defined in the same manner, thereby saving much time and trouble to the Milk Inspector. The only drawback to a complete knowledge of the results of the experiment is that by far the larger part of the physicians of the city have failed to comply with the ordinance in the matter of reporting cases. This has made an unofficial investigation of the subject very difficult. Statistics herein given have been secured through the courtesy of the management of hospitals, and of physicians. No pretension is made that the report is complete. No pains has been spared to make the report accurate as far as it goes. The limited compliance with the ordinance in reporting cases is as follows:

	1903.	1904.	
July. ....	41	January. ....	4
August. ....	36	February. ....	1
September. ....	25	March. ....	3
October. ....	18	April. ....	2
November. ....	8	May. ....	—
December. ....	2	June. ....	—

All deaths from whatever cause are reported. From the death record the following data has been tabulated and the death rate from typhoid fever compared with pneumonia and tuberculosis for the same period:

TABLE OF DEATHS.

MONTH	Sex		Race		Ages.							Total	Pneumonia	Tuberculosis
	M	F	W	C	Un-5	5-10	10-20	20-30	30-40	40-50	O-50			
July.	15	6	19	2	2	0	4	8	5	1	1	21	11	26
Aug.	16	10	26	0	1	0	6	9	4	5	1	26	9	29
Sept.	12	7	15	4	0	3	3	10	2	0	1	19	13	31
Oct.	3	0	2	1	0	1	0	0	1	1	0	3	9	26
Nov.	5	2	5	2	0	0	0	2	1	1	3	7	27	27
Dec.	5	0	4	1	0	0	1	3	1	0	0	5	36	24
Jan.	3	1	4	0	0	0	1	0	3	0	0	4	43	48
Feb.	4	0	2	2	1	0	1	1	0	0	1	4	115	38
Mch.	4	0	2	2	1	0	1	1	0	0	1	4	115	38
Apl.	2	5	7	0	0	0	1	4	1	0	1	7	126	37
May.	4	2	6	0	1	0	0	3	1	1	0	6	74	42



The omission of the data for the month of June, 1904, is due to the method of bookkeeping employed by the Board of Health. Estimating the death rate at 10 per cent., which is high, but conservative as to the number of cases, the total number of cases was placed at about 1200. Incomplete returns give a total of 1130. An estimate of 1400 would be more nearly correct. A large part of this data is very accurate and complete. It has been tabulated by months and is best shown in the following table of 863 cases:

TABLE OF CLASSIFIED CASES.

MONTH.	Sex.		Race.		Ages.							Total.	Cause.						Hospital Treatment.
	M	F	W	C	Un-5	5-10	10-20	20-30	40-40	40-50	O-50		Water.	City	Cistn	Well or	Sp'ng	Milk	
July. ....	138	93	205	26	6	14	48	86	42	18	6	231	76	11	40	3	84		
Aug. ....	132	80	188	24	7	12	41	86	41	12	8	212	83	11	17	..	64		
Sept. ....	57	46	86	17	1	9	26	39	11	6	3	103	48	6	1	..	15		
Oct. ....	32	22	46	8	1	6	12	11	12	8	2	54	22	3	5	..	19		
Nov. ....	27	11	33	5	0	5	8	10	6	3	3	38	12	3	2	..	17		
Dec. ....	15	14	28	1	0	3	6	7	9	1	2	29	14	1	1	..	5		
Jan. ....	19	11	29	1	0	1	6	15	6	0	2	30	21	2	..	..	6		
Feb. ....	24	13	35	2	2	1	11	12	4	2	3	37	25	1	..	..	7		
Mch. ....	21	22	42	1	1	2	9	16	6	2	2	43	20	3	..	..	16		
Apl. ....	23	20	43	0	1	4	10	15	6	1	2	43	19	3	..	..	10		
May. ....	13	15	28	0	4	2	5	9	6	2	0	28	18	1	1	..	5		
June. ....	6	9	15	0	0	1	2	8	2	2	0	15	12	2	1	..	2		

The various hospitals of the city report the number of cases treated as follows:

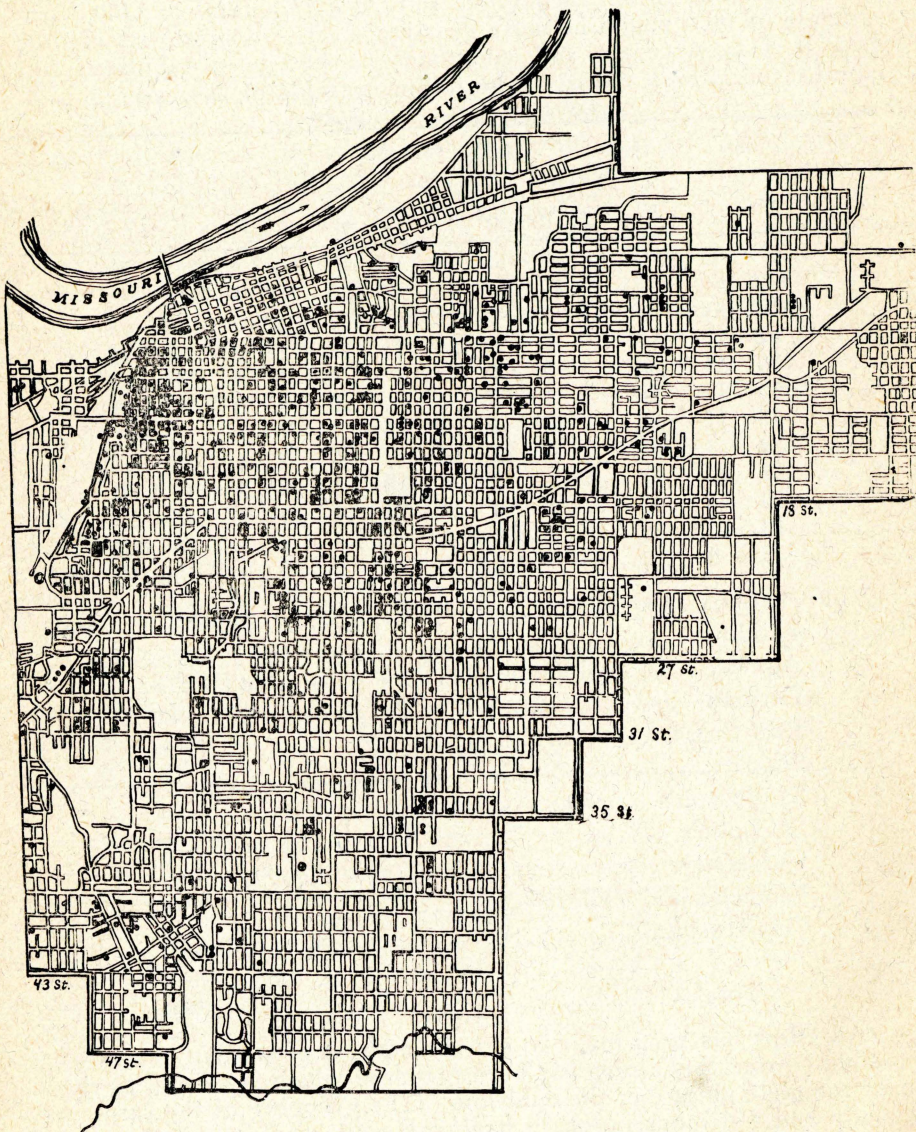
Agnew. ....	31
German. ....	47
Red Cross. ....	8
Scarritt. ....	8
St. Joseph's. ....	63
St. Luke's. ....	1
University. ....	23
Women's and Childrens's. ....	21
City Hospital. ....	56

Total. .... 258

An effort has been made to get the address of as many cases as possible. From this a map has been prepared which is offered as the most complete picture of the epidemic. The grouping of the cases is a study and a demonstration in itself. It will be observed that the cases are almost entirely confined to the limits of the public supply and that they follow the lower parts of the city and are quite numerous near dead ends of mains.



## PLAT OF KANSAS CITY, MISSOURI.





### Emergency Water Supplies.

The map and the report of cases shows that the worst series of springs and the source of infection second only to the city water, is located in West Terrace Park along what is commonly called the West Bluffs. They are found at intervals along Bluff, Lincoln, Franklin, Lafayette, Terrace and Brook streets and Allen avenue from near Seventh to Twenty-fourth streets. The water comes from crevices in the lime rocks of which the bluffs are composed. On the top of the bluffs are numerous out houses and vaults. There is not enough soil for the filtration of the escaping sewage. Only the odor and coloring matter were eliminated. The water was laden with bacteria, and being cold and sparkling, was both tempting and dangerous. A further explanation of the number of cases in this vicinity is that persons working in the west bottoms and becoming infected in that district, live in great numbers on top the hill, were sick at home and are reported from there. A number of prominent druggists on the west side report the largest summer trade in the history of their business. They attribute this to the large amount of enteric infection directly traceable to the water supply.

Another contaminated spring is located north of Independence avenue, and east of Lydia avenue in what is commonly called Hicks' Hollow. It is surrounded by a dense population and was the source of a number of cases of infection.

Another marked area of contamination is found along the depression following the bed of a stream that originally ran across Lydia, Grove, Flora, Vine, Highland, and Woodland Ave. extending southeast from about 19th and Lydia to 31st St. In this area there are a number of springs and wells more or less of the character of springs. One of these was of considerable volume, located just south of the Belt Line tracks near Flora Ave. It has since been filled and covered in street improvement. Another is on a vacant lot east of Vine and south of Twenty-first St. Both are within a block of the City Work House and the Vine St. Police Station. Both were open to surface contamination. The sanitation of the whole district is bad. Patient at 2106 Vine was sick in a cellar so dark as to require a light in the day time. At 1814 Flora the sanitation was bad, the house was damp at 2213 Woodland. A spring is reported between Brooklyn and Garfield and Twenty-ninth and Thirtieth. This location was not visited and no opinion is hazarded.

A remarkable case of spring contamination is disclosed by the investigation of a number of severe cases of typhoid fever which follow the route of a certain milk wagon. Only a part of this route has been developed, but ample has been found to identify cave spring as the source of infection. This spring is located between Holmes and Charlotte Sts. in an open field south of 37th St. It is a remarkable spring, issuing in considerable volume from a natural cave large enough to be followed for some distance in a stooping posture. There appeared to be no reason to suspect its contamination. It was no fault of the dairyman. He boiled and sterilized his vessels, but



cooled them in the cold and limpid water of this spring. Investigation showed that a sewer had been turned into the watershed.

There are a number of springs of known purity both within and without the city limits. The proprietors of these have long done a large and lucrative business in vending drinking water. After the pollution of the city water, many others entered the business and procured their water from unknown sources, and even used the names of well-known springs on their wagons and water tanks. Hotels and boarding houses procured water from some of the springs—some of them from far beyond the city limits. A number of large office buildings are supplied from springs or wells under the building. Some of these were condemned, although there was no reason to suspect their contamination.

Patients at 2456 and 2458 Charlotte used the same well. In the rear of 1509 Brooklyn a privy vault overflowed into a pond which in turn infected a well and ran over into a cellar. A polluted well at 3029 East Nineteenth St. was responsible for five cases and two deaths. Cases of this character could be multiplied indefinitely.

At No. 15 Garfield Court where there were three cases, the basement was flooded for weeks. There were a number of cases in the unsanitary McClure Flats at Nineteenth and McGee.

Many remarkable cases have been reported by physicians. Hemorrhage was quite common. Other enteric infections not developing into typical typhoid cases occurred in great numbers. Physicians were very careful and conservative in reporting cases. Doubtful diagnosis was excluded. It is a matter of satisfaction to report upon the great number who resort to the Widal reaction for accurate diagnosis. A large number of cases is reported among children under ten years of age. One mother with a four months old babe was taken with the fever and nursed her child for some time. The mother recovered, the child died. Was this a case of direct infection? This case is offered to the profession, hoping to develop some discussion and information.

From a financial standpoint the results of this experiment were disastrous. From an examination of cases about 50 contaminated wells, cisterns and springs were located. At an expense of \$50.00 each their character could have been determined. There were 110 deaths from typhoid fever during the year. The legal value of a human life in Missouri, when taken by the wilfulness or negligence of another is \$5000.00. This is a paltry sum, but Missouri is one of the most niggardly states in this respect. The treatment of the average case of typhoid fever, including nurse, medicines, hospital fees and physician, costs \$150.00.

The whole account to be charged against the city is as follows:

Deaths, 110 at \$5000.00.....	\$550,000
Cases, 1400 at \$150.00.....	210,000

Total. ....	\$760,000
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Add to this the pain, suffering, misery and heart ache, and then



credit the paltry expense saved, and see the awful sum to balance with alleged fire protection and reduced insurance rates, which items are the only defense to the accusation of polluting the water system with sewage.

There is no excuse for an epidemic of typhoid fever in cities. The infection can be prevented. It has so often been demonstrated both in this country and Europe, that it is no longer an open question, that the practical elimination of typhoid fever from cities is solved by the filtration of the water supply. The most successful as well as the most modern system is slow sand filtration. A water supply from a river like the Missouri, filtered so that the effluent of the final filters does not contain over 50 bacteria to the cubic centimeter will be perfectly safe. This is the American standard. This discussion of typhoid fever is not offered as of particular statistical value, but in the hope that it may do its part in shaping public opinion on the needs of our water system. The physicians of the city have aided greatly in the preparation of data. Only three refused to comply with the request.

E. M. PERDUE, M. D.

#### **THE PERUNA HABIT AND OTHER FORMS OF ALCOHOLISM.**

The Peruna habit and other forms of alcoholism should be looked into by its religious and newspaper sponsors. We are indebted to Mrs. Martha M. Allen, the energetic worker of the Woman's Christian Temperance Union, for having asked the Massachusetts State Board of Health to analyze Peruna. In an advertisement of this nostrum a statement was made that "Peruna has among its friends many of the leading temperance workers in this country, who give it unstinted praise, and do not hesitate to indorse it by the use of the most extravagant language." The chemist found it contained 23.46 per cent by weight of alcohol. We know of one patient, a young lady, who has been taking large doses of this compound, and has found it so exhilarating that she has made herself a sort of walking advertisement for the enterprising manufacturers. She would have been indignant if asked to take a "cocktail," or a drink of whiskey, containing less alcohol than her prized and secret tippie. The Massachusetts board found 15.33 per cent of alcohol in Vinol, 16.77 per cent in Lydia Pinkham's Vegetable Compound, 5.87 per cent in Swamp Root. In Orangeine there were found acetanilid, caffeine, and sodium bicarbonate. Concerning acetanilid, Dr. Abbott, secretary of the board, says that it should be taken with much caution lest its frequent use degenerate into a confirmed habit. The proprietors of the White Ribbon Remedy were not going to be trapped in one way—there was no alcohol in the drug, but only milk sugar and ammonium chlorid. It is "as likely," adds Mrs. Allen, "to cure drunkenness as would a blast of east wind." We have entire sympathy with the efforts of the Woman's Christian Temperance Union to expose the meanest hypocrisy of the worst of liquor sellers, the patent medicine manufacturers.—American Medicine, Philadelphia, April 25, 1903.



# DAILY REPORT

## OF THE CONDITION OF THE WATER SUPPLY FOR KANSAS CITY, MISSOURI,

### FOR THE MONTH OF MAY, 1904:

May 1904.	Pumped from River Gals.	Pumped to City Gallons	Alum Used Pounds	Temperature. C. F.	Turbidity.	Bacteria per C. C.	Remarks.
May..... 1	13054634	12470154	4400		Turbid.		Fair.
May..... 2	14976900	14350839	4400	11.5 52.7	"	240	Fair.
May..... 3	15451364	14901400	4400	12 56.6	"	180	Fair.
May..... 4	16602352	16201553	4400	11.5 52.7	"	208	Rain.
May..... 5	13320937	13744385	2800		"		Rain. { Flow line
May..... 6	12308617	12135044	2400	13 55.4	Very Turbid.	442	Rain. { washed out at
May..... 7	13864102	13756251	2400	12.5 54.5	"	252	Rain. { Turkey Creek
May..... 8	15061364	13958726	2000	13.5 56.3	Turbid.	176	Fair.
May..... 9	14584822	13901947	2000	12.5 54.5	"	224	Rain.
May..... 10	14562404	13872402	2000	13.5 56.3	"	240	
May..... 11	14970547	14219308	1600	13.5 56.3	"		
May..... 12	16069889	15383014	2800	13.5 56.3	"	320	
May..... 13	17770174	15861199	2400	13.5 56.3	"	352	
May..... 14	14898164	14609130	2400	13.5 56.3	"	250	
May..... 15	14039302	13336338	2000	14 57.2	"	216	Rain.
May..... 16	14105782	13677144	3200	13.5 56.3	"	2000	Rain. {
May..... 17	16197089	14537870	2000	12 53.6	"	2000	
May..... 18	18215917	14983385	2400	13.5 56.3	"	7680	
May..... 19	18698557	14560546	2400	13 55.4	"	2016	
May..... 20	18257694	15206221	2400	13 55.4	Milky.	384	
May..... 21	17321392	14875787	2400	14.5 58.1	"	327	
May..... 22	18057134	14734360	2000	15 59	"	1072	
May..... 23	17576894	14734360	2400	16 60.8	"	688	
May..... 24	19447979	15731833	2800	15.5 59.9	Turbid.	544	
May..... 25	19927259	17184510	3600				
May..... 26	20521822	16944393	3600	16 60.8	Turbid.	1212	Rain.
May..... 27	17543534	15184010	3200	16.4 61.5	"	360	
May..... 28	15671339	14924555	3600	16 5 61.9	"	611	Rain.
May..... 29	19561019	11482480	3200				Rain. { Filling Basin
May..... 30	16256707	13567667	3600	16 60.8	Turbid.	1280	No. 2.
May..... 31	15231124	14525230	3600	15.5 59.9	"	3416	Rain.

E. M. PERDUE.



# DAILY REPORT

## OF THE CONDITION OF THE WATER SUPPLY OF KANSAS CITY, MISSOURI, FOR THE MONTH OF JUNE, 1904:

June 1904.	Pumped from River Gals.	Pumped to City Gallons	Alum Used Pounds	Temperature. C. F.		Turbidity.	Bacteria per C. C.	Remarks.
June..... 1	15717667	15031798	2800	16	60.8	Milky.	1344	Rain.          Break down at Tur key Creek—no water
June..... 2	17479555	16583417	2400					
June..... 3	16071907	15756910	2400	16.3	61.34	Milky.	1632	
June..... 4	15613747	15738857	2400	16.5	61.7	"	32000	
June..... 5	14002679	13109355	2400					
June..... 6	16022849	15587206	2400	16.5	61.7	Almost Clear.	43000	
June..... 7	15949987	15297561	2400	17.5	63.5	Milky.	50000	
June..... 8	11565007	10688463	1600					
June..... 9	15019364	14645750	2400	16.3	61.34	Milky.	8576	
June..... 10	16744664	16319196	2000	16.3	61.34	"	6278	
June..... 11	17438894	16609720	2400	18.5	65.3	"	3200	
June..... 12	16733152	16298600	2000	18.5	65.3	"	3460	
June..... 13	16683614	16288252	2400	19	66.2	"	3000	
June..... 14	17638512	17222382	1600	18	64.4	"	3456	Rain.
June..... 15	17993054	17361347	1600	18	64.4	"	1920	
June..... 16	16729552	16061790	1600	18.4	65.1	Almost Clear.	2016	
June..... 17	14761747	14461613	1600	18.6	65.48	Turbid.	1088	
June..... 18	15999472	15593307	1600	20	68	"	4120	
June..... 19	14600000	13930722	1200					
June..... 20	15055604	14668475	1600	20	68	Milky.	13824	
June..... 21	17190974	16684580	2000	20.3	68.54	Turbid.	13568	
June..... 22	17265232	16721769	1600	20.6	69.08	"	5184	
June..... 23	17390032	16695885	1600	21.5	70.7	"	3712	
June..... 24	17113552	16804933	2400					Rain.
June..... 25	16492387	16193695	2400	21	69.8	Milky.	1024	
June..... 26	14648422	14226697	2000					
June..... 27	15067507	14530917	3200	20	68	Turbid.	276	
June..... 28	15832147	15004265	3600	18.6	65.48	"	5000	
June..... 29	16317473	15763527	3600	19	66.2	Milky.	436	
June..... 30	16438369	15632700	4000	18.5	65.3	Turbid.	992	

E. M. PERDUE.



## THE BOARD OF HEALTH AND THE PRACTICE OF HYPNOTISM.

### The Action Approved Restricting the Practice of It to Physicians, and Lay Objectors Criticised.

Dr. Hughes and the Municipal Board of Health have taken the proper stand in their resolution against the practice of hypnotism by any person other than medical practitioners. Its unrestricted practice by irresponsible persons is a danger and menace to society, and the quicker the law making power acts the better.

Dr. Hughes and the Municipal Board of Health do not favor or propose any law which will prevent societies organized for psychical research from pursuing their investigations in the interest of science, because through the investigations of these bodies, viz.: those of Boston and London, the advance in hypnotic investigation to a point where mental suggestion has almost become a demonstrated fact, is due. The student of hypnotism at this stage of its advance who positively and absolutely denies the power of verbal suggestion to overcome the strongest will and moral force, which are simply the auto suggestions or verbal suggestions of a lifetime, has not kept pace with and is not conversant with the latest conclusions of scientific investigators in this field.

A close study of this question forces on my mind this conclusion, that repeated hypnosis will overcome all powers of resistance. I make this statement with a solemn belief in its absolute truth, and I will fortify my positions with the backing of the leading authorities on this question. I do not think for a moment that Dr. Hughes or the Board of Health are so egotistical as to believe all knowledge is with the profession of medicine; but there is no question in any sensible mind but that so potent a force for good and evil as hypnosis should be taken out of irresponsible hands and intrusted to individuals who are qualified by training and experience to handle it. Its practical application is in the field of medical practice; then why should it not be restricted by law to the responsible and educated physician?

In a recent issue of the Post-Dispatch appeared two articles from laymen on the subject of hypnotism. As M. S. Bockwith is dead, I will confine my reply to Andrew J. Woolsey. I will pass over all of his remarks of a personal nature and where he advances any argument, I will answer it.

Mr. Woolsey first attacks the position that hypnotism can be made the agent of crime. Of the truth of that fact there is to my mind not a scintilla of doubt. As I said and here repeat, repeated hypnosis will overcome any will power and break down any barrier of moral force.

Can the hypnotized fall victims to crime? I quote from Dr. Frederick Bjornstrom's work on Hypnotism, Stockholm, Professor of Psychistry, late Royal Swedish Councilor: "The unconsciousness



and loss of will, which are so easily caused in the hypnotized can, of course, with the greatest facility be misused for immoral and criminal purposes. Rape, murder, robbery, arson, theft, abduction, etc., are then easy to accomplish. In the beginning of this century, the people of India knew that the easiest way to steal children and carry them away was to magnetize them. Such thieves were known in India under the name thugs or bheels, and in 1820 a band was discovered whose members in the course of twenty years, had stolen millions of children. A child recovered at that time was entirely stupid and did not recognize her father until she had been de-hypnotized by the ceremonies of the Buddhist priests. In France some remarkable medico-legal cases have occurred with reference to crime against morality under hypnosis; one of them combined with abduction. Besides by robbery and theft the hypnotized might easily be deprived of their property in a more delicate manner, so that it would look as if they voluntarily gave it away, if only a powerful suggestion were given in that direction."

In support of this proposition Dr. Bjornstrom cites some experiments of M. Liegeois, Professor of Jurisprudence at Nancy, and a scientific investigator of hypnotism. M. Liegeois reported several cases before the Academic des Sciences Morales et Politiques:

Mrs. O., is a young and very intelligent lady. She has received an excellent education. At first she energetically resisted all suggestions, but gradually yielded. I made her believe that she owed me 1,000 francs, and asked for her note. She obstinately refused to give it, and declared that she owed me nothing and that she would never acknowledge any debt to me. I insisted. She began to hesitate. She remembered it, acknowledged it before several witnesses and wrote the note. On another occasion, when she seemed fully normal, he told the same lady in the presence of her husband and several other witnesses that she had promised to pay him, on account of her husband's indebtedness to him, 100,000 francs. At first she denied that such a thing had ever been mentioned. Afterwards she searched her memory, finally found that he was right, and wrote a bond for the sum."

In the same manner the hypnotizer can abuse his influence over the sleeper, by compelling him to make out donations or to make his will in the other's favor, and even to take upon himself the worst fictitious crimes. There would even be no difficulty in making away with an enemy or objectionable person in a manner which would not betray the originator of the crime. It is only necessary to hypnotize the victim and to give him the suggestion that he will commit suicide. With the strongest possible love of life, he will have difficulty in resisting such a suggestion.

There is still another way in which the hypnotized can be injured, viz., by drawing forth, under hypnosis, confessions and secrets which they would not voluntarily disclose when awake. Of course, this may not succeed with all somnambulists, for some are very cautious and reserved and some may even play the hypocrite and lie and



deceive their hypnotizer. But the great majority will prove very frank and outspoken, and during the sleep may much to easily hurt themselves or others by revealing secrets which ought to be kept.

Hence the answer to the second question would be that the hypnotized may fall hopeless victims to the most criminal and harmful actions of all kinds, not only while they are asleep, but also after they have been awakened, and certain sensitive individuals even without being hypnotized.

"There lies such an infernal power in the hands of the hypnotizer that every one ought to be strictly forbidden to meddle with hypnotism, except those who assume the responsibilities of a physician and who have the people's welfare and woe in their hands."

The foregoing quotation from Dr. Bjornst rm, Shows that there are others who agree with Dr. Hughes and the Municipal Board of Health, that the indiscriminate and irresponsible use of hypnotism should be controlled by law.

Dr. Bjornstrom also asks this question and answers it affirmatively: "Can one hypnotized be used in the service of crime as a ready tool without a will?" From the cases studied and reported by Liegeois and others, it plainly follows that the hypnotized can by all kinds of suggestions be made not only to harm themselves, but also others, and that they may even be irresistably driven to any crime. It is chiefly in this that the darkest side and the worst dangers of hypnotism are found. By suggestion, persons can also be made to commit perjury or to bear false witness; and this can be done in various ways;; either so that they make an entirely false statement of occurrences which they have really witnessed or so that they are by retroactive suggestion, so-called, made to believe that they have witnessed occurrences which really never took place.

The Tiza-Eslar affair is very illustrative of retroactive hallucination (Bernheim; Suggestive Therapeutics, p. 157): "A young Jew, Moritz, of a village in Hungary, under the terrorizing influence of the Commissioner of Public Safety, testified that he heard a cry, went out, looked through the keyhole of the temple door, and saw Esther stretched on the ground. Three men held her. The butcher cut her throat and caught the blood in three basins." However, justice triumphed in the end and the twelve Jews whose lives were imperiled by the boy's confession escaped an ignominious death.

Mr. Woolsey quotes Dr. Albert Moll, of Berlin, to prove his side of this controversy. I will also quote Dr. Moll and show his actual standing on the question under debate. Under the caption, "The Legal Aspect of Hypnotism," page 334, et seq., he says:

"The first point to be considered is the relation of hypnotism to crime. The crimes committed on, and by, hypnotic subjects must both be discussed. We will begin with the first. The offenses against morality to which hypnotic subjects are exposed are important; few such cases have hitherto come to the notice of the law. F. C. Miller supposes that this may be because, from the loss of memory, the subject is usually unaware of them. But Forel's supposition



seems to me more probable. He thinks such offences are rare because experimenters know that loss of memory is only temporary and that the subject may unexpectedly remember the occurrences of earlier hypnosis. A number of such cases were brought to justice in Germany at the time when animal magnetism was flourishing.

"Lately several cases have been made known in France. The case of Castellan in 1865, reported by Prosper Despine, is better known. An assault was committed on a subject in an obviously hypnotic state, although she retained her consciousness. Liegeois refers the case to suggestion. The Levy case in 1879 is also interesting. A dentist of Ronew, named Levy, assaulted a girl in the magnetic sleep. Levy was imprisoned for ten years. There are other cases in Liegeois, in Goltdammer's Archives for 1863 and in F. G. Miller's book. The number would be increased if some cases of auto-somnambulism were counted among them. Among further offenses against hypnotic subjects may be mentioned intentional injury to health, which in some cases might be caused by post-hypnotic suggestion. All sorts of paralysis, loss of memory, etc., may be thus caused; even some paralysis with objective symptoms, such as the so-called paralysis dependent on idea.

"I need hardly add that bodily injury may be caused by inattention to the proper precautions, nor need I discuss the question of deprivation of will in cases when the subject is hypnotized without his consent. Where is the protection in these cases from Mr. Woolsey's auto-suggestion?"

"It has also been asked (Roux-Friessineng) whether suicide might not be caused by suggestion, to which I say, yes, if the suggestion were adroitly made. The hypnotic state might be used to get possession of property illegally. People can be induced hypnotically and post-hypnotically to sign promissory notes, deeds of gift, etc."

Many proposals have been made for avoiding the possible dangers of hypnotism to health as well as morality. Delaerods in France demands that hypnotism should be legal only for doctors, and then only when at least two are present.

Friedberg wished in 1880 that hypnotic experiments should only be allowed in the presence of a doctor. The foregoing conclusively proves that Dr. Albert Moll and other authorities on hypnotism agree with the views of Dr. Hughes and the Municipal Board of Health that hypnotism should be restricted to the medical profession. I will now quote the opinion of Dr. Luys, of Paris, France, a noted neurologist and a deep student of hypnotism. He uses this strong language: "The dangers of it (hypnotism) are appalling. I have studied faithfully, but can see no way in which they can be mitigated; nor does the future seem to promise any way. I cannot but feel convinced that, while we have undoubtedly found a valuable aid to medicine, and while we may have found an explanation for most of the things which have made science wonder during the ages in hypnotism, still we have also found in it the most horrible of all weapons for evil-doers. Criminals of all kinds, from the merely brutal to the



magnificently skillful, may find in the trance and its accompaniments the method by which they may do any crime, any wickedness, without running the slightest risk of discovery. The man who knows what this really amounts to gasps when he thinks of it. It is not less than appalling."

Mr. Woolsey speaks of the protection which auto-suggestion gives the subject. This presupposes a knowledge which the subject does not possess, and even if they have the knowledge it is not a safeguard. Dr. Ochorowics has many times endormed subjects against their will—so have others.

I grant it that the medical profession does not possess all knowledge—not even of hypnotism. But all the investigations of any scientific value in hypnotism have been made in the past, and are being made to-day, by the medical profession. If Mr. Andrew J. Woolsey is a graduate of Dr. Parkin's Chicago Psychological Institute—and he represents the best thought and culture of that institution—the St. Louis medical profession need not worry over the loss of any advantages which that institution gives.

Mr. Woolsey seems to think that hypnotism is applicable to all diseases. With that view he ought to join the divine healers and go to work. Scientific physicians know that hypnotism subtends a small arc of the complete circle of the healing art, perhaps 20 per cent, and in that measure they apply it. In spite of the claim of Mr. Woolsey that he possesses the last and advanced thought on hypnotism, St. Louis physicians and medical men everywhere will approve the course of the Municipal Board of Health in regulating and restricting the practice of hypnotism.

EDWARD F. BRADY, M. D.

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### **MAXIMS FOR PROLONGING ACTIVE AND USEFUL LIFE.**

(Note.—A maxim is useful because of its readiness of application. The mind has to reduce its conclusions to postulates before it can apply them to practice.)

1. The commercial value of a life lies solely in its productive periods; the other periods are a burden upon this.

2. This period should be prepared for from infancy, protected in adult life, and extended as long as possible into old age.

3. Constitutional vigor is created mainly by proper food and proper hygiene in youth.

4. No person over forty years of age should subsist mainly on animal foods, which are very good in early life. The reason for this is contained in maxim 14. The elasticity of some of the most important tissues in the body cannot be preserved by a person over forty years of age who continuously loads up the body with the waste products of nitrogenous foods in excess, even if he had the best food in youth. Fruits and cereal foods should be largely and generally used by all persons over forty years of age.



5. Nerves are exceedingly important. They grow best in the country. Let youth be passed as much as possible away from the crowded centers of population.

6. Education may be misdirected and may be overdone. A good machine may be ruined by making it too elaborate. A good knife may be rendered useless by sharpening it all away.

7. Regular, moderate, physical exercise is essential, and is generally neglected.

8. Do not make a burden of amusements. They may, and often are, made worse than overwork or undue worry.

9. Do not set an impossible ideal of life. It results in disappointment, and that ages.

10. Cultivate a serene mental attitude, and develop a capacity for deliberate enjoyment of whatever is at hand. The greatest pleasure often comes from little things easily and often overlooked.

11. Avoid every excess. Do not overwork, overplay, overeat, overdrink or oversmoke, or allow yourself to become overinactive.

12. Do not assume obligations that you cannot discharge. That is the secret not only of much physical but of much moral and mental disaster.

13. Study your diet and your hours of labor, sleep, and relaxation, and conform to your constitutional requirements.

14. Take particular precaution to preserve by daily actions the elasticity of all of the tissues.

15. Maintain self-respect, avoid sordidness and gloom, and "grow old gracefully."

16. It is desirable to diversify your interests, have one or two useful diversions, using a portion of your time away from your regular occupation and habitation.

17. Aim at a less strenuous and more even and continuous period of productiveness. Do not rush headlong to a brilliant climax of a brief career, cut short in the midst of continuing obligations, or leading to a disappointed and garrulous old age. It is far better for the race, and pleasanter for the person, to perform comfortably for fifty years the duties of life, enjoying to the full, and throughout the longer period, its rich experiences.

### VACCINATION ECONOMY.

"The smallpox has proved to be a costly visitor to some counties in this State, where vaccination might have prevented it.

"It will not do to try to economize public moneys at the expense of the public health, and no county has the right to expect exemption from smallpox, unless it enforces vaccination year in and year out. And in this matter brotherly kindness, as well as self-interest, combine to make it the duty of the well-to-do to look after the poor and negligent.

"Some of the infected counties complain that the penitentiary authorities will not at the present time send for the prisoners lying in their jails awaiting entrance upon prison life here; but they are unreasonable. They



should see that the most ordinary prudence requires that the penitentiary should be kept isolated from infectious disease. Any failure to do so—any lapse—might be followed by dreadful consequences.

"Then penitentiary officers act from the most unselfish motives, and if they err they would better err on the safe side."

The above, taken from the *Times-Dispatch*, clearly and forcibly expresses the views of the State Board of Health on the question of vaccination.

When smallpox appears in a county or community instead of meeting the issue squarely and boldly, the usual course is that of procrastination; to wait until the disease is fully developed—until there has been a number of exposures, hoping that the disease in question will turn out to be something else. Often there is a divided profession as to the diagnosis, which is a sufficient excuse for the financial board of the county, the Board of Supervisors, to decline to furnish the means to suppress the outbreak. This stand which is so often assumed by the Board of Supervisors ties the hands of the Board of Health in many counties and renders the law inoperative.

There is no question as to the efficacy of vaccination. It is not necessary in this enlightened age to produce statistics to prove this. It is hoped that the profession will join hands and present to the next Legislature amendments to our present law that will remedy the defects as to vaccination.

This protection against smallpox should be given the children of our State every year. No child attending school, either public or private, should be allowed to enter until they can show a good vaccination scar.

If this is done, in a few years the large proportion of the children would be protected, and in a shorter period than any one would realize smallpox would be almost an unknown disease.

In Germany the law provides that every infant should be vaccinated before it is two months old. It is rigidly enforced, consequently smallpox has been practically eradicated from that country.



# BULLETIN

## OF THE

# MISSOURI STATE BOARD OF HEALTH

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### SOME SUGGESTIONS AS TO SCHOOL HYGIENE.

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It is a commonly accepted fact now-a-days that the requirements of modern school life are so great as to tax almost beyond endurance the powers of an average child. It is true, also, that soon after entering school, many children are overcome by serious physical disorders.

Perhaps the most common disease which develops in the early days of school life and is dependent upon the educational process, is near-sightedness. We are not in the habit of thinking of near-sightedness as a disease, but as a matter of fact, it is, in 80 per cent. of cases associated with true disease in the coats of the eyes containing the nerves and blood vessels.

When one considers that 10 per cent. of all cases of blindness of one eye are due to the effect of near sightedness, it is not surprising that the means for the arrest of progressive near-sightedness are being actively investigated by those interested in school hygiene.

Many years ago it was proven that the educational process is responsible for the great increase of near-sightedness during school life, and for almost a century educators and those interested in the public health, have busied themselves with the problems directly connected with this particular matter. It was at first thought that the faulty conditions of ventilation and lighting of school rooms, together with poorly printed books and improperly constructed seats and desks



were, in the main, responsible for the eye troubles of school children. It soon became evident, however, that, after all the above mentioned faults of construction were corrected, they were only in part responsible for the difficulties. In school houses constructed absolutely perfect as to hygienic conditions, the great percentage of increase of near-sightedness was found to exist in practically the same degree as in poorly arranged buildings.

Near-sightedness among school children increases year by year. At the time of beginning school, about 4 per cent. of the children are near-sighted. The number afflicted increases to 10 per cent. in grammar schools and to the alarming extent of 20 per cent. in normal schools and colleges. Not only does the near-sightedness increase in numbers, but it becomes greater in degree; and since progressive near-sightedness ends commonly in partial blindness at about mid-life, it would seem that we are scarcely doing our duty by those of tender years, entering upon school life unless we adopt every known means to limit the increase of near-sightedness. In many of the large cities the effort is being made and satisfactory results are gained. The effort is needed quite as much in the country. In the absence of a system of efficient school inspection by physicians, much can be accomplished by teachers. Every teacher, should, at the beginning of the school year test his pupils' eyes as to the power of seeing. Such a test requires no special training or equipment further than a test card, upon which are engraved letters gradually diminishing in size. The pupil's ability to read properly such letters, under definite conditions, indicates his power of seeing.

It is particularly important to make such a test each year and preserve the records of findings, for by comparison of results from year to year much valuable information is to be gained when efforts are made to determine the effect of educational process upon a given child's eyes.

As has been said, no special training is necessary to conduct such examinations. The charts used in the test may be had by Missouri teachers by applying to Prof. A. Ross Hill, Dean of Teachers College, University of Missouri, Columbia, Mo. The charts are accompanied by full directions for their use. The chart will not be of service in enabling teachers to



determine just what condition may be present in a child's eyes. It is intended simply to determine whether or not a child's power of seeing is up to the normal standard. If the vision proves to be below the standard, it becomes the teacher's duty to send the pupil to his parents with a recommendation that he be sent to his physician for examination of his eyes.

If a child's power of seeing is found to be normal, he should be allowed to begin his school work and continue it, so far as his eyes are concerned, until he complains of red, tired or painful eyes or headache after the use of his eyes. These things may indicate the presence of a condition quite different from near-sightedness, but just as important so far as the necessity for prompt treatment is concerned.

A child giving evidence of eye strain as shown by the general symptoms noted above, should be quite promptly sent to his parents with a request from the teacher that he be sent to his physician for examination of his eyes.

Fortunately, we have always at hand the means with which to arrest the increase of near-sightedness, and do away with the discomforts and harmful results of eye-strain.

Scientifically fitted and properly adjusted glasses usually accomplish the desired result and enable children to pursue their school work without harmful results.

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### MEDICAL INSPECTION OF SCHOOLS.

BY HELEN MACMURCHY, M. D.

Compulsory education now almost the rule, sometimes means compulsory infection, hence the Medical Inspector is needed. How often we hear the complaint "the child never had a day's illness till it went to school." Then it got one infectious disease after another. Some parents have a dread of sending a child to school on this account. A child suffering with diphtheria is not at first recognized, but during this time it may attach the infective matter to the desk, chair, books, slates, pencils, sponge, cup, etc. In kindergartens the danger is much greater both by direct and indirect infection, because these children are brought closer to each other. One unrecognized case may thus give rise to a dozen more. Regarding the contact of children in the kindergarten and the



interchangeable use of material we may say: The chairs are portable, are carried from place to place—one is not allotted to each child—all are in common. The tables are long enough for four or five children to sit at. It is impossible to arrange for each one a special chair. The material used is also interchangeable. Thus we have two dozen worsted balls for seventy children to learn color, form, etc., from. The blocks are handled by several classes the same day. So with the iron rings, sticks, planes, tablets, beads, etc. The napkins used at lunch are washed once a week, and oftener if soiled. In playing games the children stand holding hands. Many plays bring them close together.

In examining children every facility is given the doctor, and he reaches satisfactory conclusions with the least possible delay. As a tongue depressor a piece of clean pine costing a trifle is used once. The thermometer is rarely used.

Little protection would come by trusting to parents, for constantly children come with suspicious throats. Yet when sent home with a note telling why and urging the calling of a physician, a parent comes back with the child to abuse the teacher, and the declaration that its nausea and vomiting and constitutional symptoms were due to indiscretion in eating, that the sore throat was simply tonsilitis and the patches were of no importance.

The history of such inspection is very interesting, but cannot be given here. It varies in different countries and states. Recently a radical change has been made in this work in New York. Formerly the isolation of children was left to the teacher, some not very observant, others depending upon their own diagnostic skill, neglected to send doubtful cases to the physicians. In order to obviate this the Inspector visits the class room once a week, making an examination sufficient to detect any disease.

Sometimes an epidemic is necessary to convince a community of the necessity for medical inspection. It pays to prevent disease. There is no reason why it should be limited to large cities. In smaller places it should be easier to execute the plan. From the figures given by the Inspectors in various places it is very easy to estimate the great value of the work everywhere. The function of the school doctor in relation to the children is often mistaken even by medical men



who should know better. It is no part of his duty to prescribe or treat any individual. His work is preventive. He may call attention to the need of glasses or notice the presence of adenoids, and he should examine the sanitary state of the buildings, the methods of education, requirements of physical exercise, avoidance especially in the very young of overstrain from prolonged fatigue or improper tasks, an act as counselor or adviser to assist and collaborate with the teacher. Medical inspectors should prevent children, as far as possible, from being exposed to communicable disease. Help children with defective sight or hearing to profit by the education the state is giving them and pay attention to their physical condition. What is the sense of promoting children to a higher grade when their bodies are unfit for that grade.—*American Medicine*, May 21, 1904.

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### THERAPEUTICS OF TUBERCULOSIS.

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BY N. P. WOOD, M. D., INDEPENDENCE, MO.

In the brief time allotted, this paper it will not be possible to review all of the therapeutic agents that have been used in the treatment of this disease. Neither will climatic or sanitarium treatment be included, but will be confined to the home treatment of the unfortunate condition, known as general tuberculosis; naming only such agents and methods that have served the best purpose in this connection. When we remember the fact that tuberculosis has claimed its numberless victims from all classes, in all ages and from all nations, together with the fact that great and persistent effort has been made to obtain some agent or measure to control or cure this, the greatest enemy of the human race, we are driven to the regretful admission that therapeutics has no specific in the treatment of tuberculosis. Then in the management of general tuberculosis, as we now understand it, there can be but two objects in view.

First, improved nutrition, and second, mitigation of unkind symptoms. Improved nutrition implies good hygienic surroundings, exercise in open air, including lung gymnastics, good food, tonics and a cheerful spirit. In the attainment of the first of these objects we strive to improve the appetite and the



digestion, stimulate secretions, control cough, fever, sweats, diarrhea and hemorrhage.

Patient should be kept in open air as much as possible. When fever is high he should be kept in bed, but bed put in the most airy place the surroundings will permit.

If able, allow patient to exercise moderately, stopping short of fatigue. This will improve appetite and digestion and increase resistive force. Woolen or silk suits should be worn the entire year.

Proper feeding is one of the most important factors in the management of tuberculous people. Food should be carefully selected, deliciously prepared and judiciously administered; selecting those articles containing the most nutrition to given quantity. Animal diet will usually meet these requirements best, such as milk, eggs, beef, mutton, chicken, fish, &c., and as much as can be digested—no more.

If digestion is bad, small amounts frequently given will be better borne. Acid hydrochloric dilute or some form of pepsin, or both, or creasote, will aid a delinquent stomach. The administration with food of artificially obtained gastric juice, as suggested by Hepp, will aid digestion.

Before eating or drinking patient should wash out mouth with some good antiseptic solution. This is especially important in laryngeal or pulmonary tuberculosis. In thus doing we may remove one of the most fruitful causes of secondary gastro-enteritis, so common in this disease. The fact that gout and tuberculosis are seldom found in the same individual, has suggested the idea of producing a gouty diathesis.

This was undertaken by the administration of urea by Harper and others and a strictly meat diet, with some apparent results in joint tuberculosis, but none in pulmonary.

The therapeutic agents entitled to a place in the treatment of general tuberculosis are really few in number.

Cod-liver oil, iron, arsenic, strychnia and creasote. While many other agents have been used and extolled, none have specific action. And the above named ones are entitled to the highest esteem in the treatment of this desperate condition.

Cod-liver oil is an old and has long been a popular remedy. It is indicated whenever nutrition fails. Children usually take it better than adults. And it is specially adapted to



joint, bone and glandular tuberculosis. The pure oil is preferable, given in drachm to half-ounce doses.

Small doses are many times well borne when larger ones are not well received by the stomach. If it or any other agent, interferes with digestion, they must be discontinued promptly and permanently.

Any agent that retards digestion or disturbs nutrition is contraindicated. Iron, arsenic and strychnia are good tonics.

Iron is indicated in anæmia as a blood tonic and arsenic as a general tonic, and strychnine is especially serviceable when heart is weak and irregular. A dose of gr. 1-40 in early morning will often enable patient to take morning bath and alcohol rub.

These three combined in the form of ferri carbonate grs. iii to v, arsenious acid gr. 1-30, strychnia sulphate gr. 1-40, made in pill, is a good tonic and is usually as satisfactory as any tonic we may suggest.

Creasote is perhaps one of the most useful agents in the whole catalogue of remedies.

The strange bit of its history is, that after having fallen out of use for more than half a century, it has been revived and today holds the highest place in the therapeutics of this unfortunate malady.

By its judicious use it appears to improve the appetite and digestion, by discouraging fermentation and thus aid materially in attaining the chief object in the treatment, *i. e.*, improving nutrition.

Is also useful in intestinal tuberculosis. For intestinal disturbances it may be given in a keratin capsule, as suggested by W. H. Flint' which capsule is not supposed to dissolve until it reaches the alkaline secretions of the intestine.

Is best tolerated in small doses. At first m. i to ii, which amount may be increased gradually until m. x or xv be given.

The very large doses some clinicians have reported given are objectionable on the grounds they are apt to irritate the stomach and urinary apparatus.

Creasote inhalations are useful when the larynx is involved.

Guaiacol is preferred by some physicians and patients. But when both are rejected by patient their salts may be used.



Cinnamic acid has claimed attention recently, but results thus far do not warrant a very high commendation.

Ichthyol has claims of positive virtue in tuberculosis—especially when the bones, glands or larynx are involved, and in tuberculous ulcers.

After ulcer is curetted it is applied to exposed surface.

It may serve well in intestinal tuberculosis combined with iodoform. Iodoform in joint tuberculosis is a familiar treatment to every physician and needs no comment.

The comfort and welfare of the patient demand attention to some of special symptoms by way of mitigation. Such as fever, cough, diarrhea and hemorrhage.

There is perhaps no fever so sure in its appearance and so persistent in its stay at this hectic fever. The fact that it is consuming the strength of the patient and at the same time associated with a disease so ravenous in its assault on the vital forces, sometimes puts a doctor wondering what he shall do with it.

Because of these facts the coal tar preparations are contraindicated, theoretically, but practically are admissible in some cases.

If combined with a heart stimulant they are less dangerous in small doses than the consuming process of a high temperature.

Three or four three-grain doses of phenacetine with strychnia, quinine or whisky an hour before fever period will control the fever measurably and add much to patient's comfort.

But the fever may be cooled by baths and sponging. While fever runs high patients should be kept in bed.

Sweating can usually be controlled ac. sul. arom., atropia, agaricin and the salt shirt.

A woolen shirt wrung out of a strong salt solution, dried and worn during the sweating period lends good service.

Cough is another very troublesome symptom. If loose give whisky or brandy; but if a dry cough, whether light or a hard cough, some sedative is desirable, as heroin, codeine, morphia. If given in small doses and often repeated they control it very much more satisfactory than the cough syrups, composed of amm. salt, ipecac, squills, &c. These mixtures are generally nauseating.



In all cases of persistent cough the posterior nares, pharynx and larynx should be examined. It will occasionally be found that a fissure or an ulcer is responsible for the cough. In such conditions more relief from the cough will come from local application of some good antiseptic, and the inhalation of creasote, benzoin, &c.

Diarrhea is frequently present as a secondary and occasionally as a primary condition in tuberculosis. In the early stage, when not severe, the regulation of diet, (care not to swallow sputum,) and bismuth and pepsin, will in most cases give relief. Later in attack, when the diarrhea is more severe, opii, lead, acid tannic, &c., may be required.

If tuberculosis of the intestine is found it is very proper to resort to morphine, rather than temporize.

Hemorrhage is sometimes troublesome and dangerous.

If profuse, put patient at rest in bed and narcotize gently; suprarenal capsule may be given. But most of the hemostatics, as ergot, tannic acid, &c., are useless, if not harmful.

Strapping may be resorted to with some benefit. Pads applied to axilla and over femoral vein sufficiently tight to arrest in a measure the return current, but not tight enough to interfere with the arterial current; strap two limbs at a time, and after twenty or thirty minutes gradually loosen straps and apply to the other two limbs. Thus the patient is "bled into his own limbs," which reduces the blood pressure in the lungs. The hypodermic injection of gelatine has been used for hemorrhage, but it has so often failed and has been so frequently followed by tetanus that it has not yet taken a credible place among the hemostatics.

Intra-tracheal and intra-pulmonary injections have been found both dangerous and productive of little good.

The serum treatment has been used in recent years and has had some very enthusiastic supporters. While in some cases it has appeared to arrest the progress of the disease, as shown by checking the fever and sweats and the fattening of the patient for a time, the results have not been convincing as a curative agent. However, the serum treatment is at present stimulating the highest hope of a panacea for tuberculosis.

The day may come in the progress of medical science when some agent or method may be discovered for the cure of tuberculosis. But the day *will* come, when through



prophylactic medicine, tuberculosis will be almost entirely eliminated from the nomenclature of medicine.

### **PUBLIC HEALTH AND SAFETY.\***

CHARLES V. CHAPIN, M. D., SUPERINTENDENT OF HEALTH, PROVIDENCE, R. I.

**GENERAL SUPERVISION.** The first state to establish a central board of health was Louisiana in 1855 followed by Massachusetts in 1869. Since then the organization of state and territorial boards of health has rapidly progressed till in 1902 there remained only four states or territories without one. During the past year boards have been organized in Arizona, Georgia and Oregon, so that Idaho is now the only state without a central sanitary organization.

Those members of these boards who are not so by virtue of some other office are all appointed by the governor, and in Georgia ['03 p. 72] it is required that one member be appointed from each congressional district. The question of the quarantine of one place against another has been one of vast importance in the southern states, and the fact that this board has large quarantine power is doubtless the reason why it was deemed necessary to secure equal representation of all parts of the state by providing for a large board appointed as above. In Oregon ['03 p.82] it is provided that in the appointment of the six members of the state board various sections of the state shall be represented. The organization adopted in Arizona is more in accord with the modern tendency toward a compact executive. In this territory ['03 ch.65] the Board of Health consists of three members, the governor, the attorney general and a superintendent of public health appointed by the governor with the consent of the Legislative Council. In practice it will doubtless be found that the superintendent will perform all the duties of the board, the ex-officio members merely serving as his advisors.

The duties of State Boards of Health were at first largely advisory, but of late they have been acquiring more and more authority, particularly in legislation, the direct control of communicable disease and the supervision of local sanitary officials. Notwithstanding the fact that there are important de-

\*See also Governors Messages and Summary of Legislation, 930.



cisions against the validity of granting legislative power to purely appointive boards or officers, and though there are practical reasons why this should not be done, such powers continue to be freely conferred by state legislatures. All of the state boards established in 1903 were invested with abundant authority to legislate, particularly in regard to quarantine, contagious diseases generally, nuisances and the disposal of dead bodies. Also in Delaware ['03 ch.327 § 3], Nebraska ['03 ch.59 § 1] and New Mexico ['03 ch.103] additional powers of a similar nature were given to the already established State Board of Health. In Delaware the state board is given the very broad authority to make regulations concerning contagious diseases, the removal of dead bodies "and such other sanitary matters as admit of and may best be controlled by a universal rule." In New Mexico the central board has the authority conferred by the century old Massachusetts law, which has been so often copied, to make "regulations respecting nuisances, sources of filth and causes of sickness," though in most of the states following this form such powers are conferred only on the legislative branch of various local governments. Besides the conferring of legislative power on the state board, the centralizing tendency in sanitary affairs is shown in other ways.

Nearly all of the acts of the year relating to state boards invest them with the control of quarantine. There is often much uncertainty attaching to the use of this word even in statute law, but properly, quarantine refers to the control of communication with infected cities, townships or districts, though it is often erroneously applied to the isolation of infected persons in their homes. Most of the recent laws on the subject place the control of quarantine with the state board rather than with local boards where it was formerly often lodged. The laws are sometimes very broad as in Georgia, where the state board is to have "supreme authority" in matters of quarantine. This central control is certainly a distinct advantage, and will do away with most of the annoying and often unreasonable restrictions on commerce which were formerly the result of every outbreak of yellow fever. While the states are thus gradually assuming control of inland quarantine, they are transferring to the federal government author-



ity over maritime quarantine though no state has taken this step during the year just past.

Most of the state boards are now given very considerable executive power even in local sanitary management. Usually this control in local affairs is conferred on the state board only when the local authorities fail to take proper steps to control contagious diseases or to abate nuisances, or are otherwise negligent in the performance of prescribed duties. Georgia ['03 p.72 §3], Indiana ['03 ch.83], Nebraska ['03 ch.59] and Oregon ['03 p.82 §10] have such provisions, and similar authority is granted in Delaware ['03 ch.327 §3]. In Arizona ['03 ch.65 §10] the state exercises a more complete control in local affairs, for the county superintendent of health is to be subject to "the supervisory control of the Territorial Board of Health and the territorial superintendent of health." In Nebraska ['03 ch.59], in order to better supervise the local sanitary administration, a state sanitary inspector is appointed. But the state can exercise the most effective control in local affairs by appointing the local sanitary officials. During the year two territories provided for this. In New Mexico ['03 ch.103 §22] the Territorial Board of Health appoints the county health officer and his assistants, and in Oklahoma ['03 ch.5] the superintendent of the territorial board appoints the superintendent of the county boards. In New Jersey ['03 ch.215] an entirely novel method has been inaugurated of exercising a central control over local sanitation. It is generally recognized that one of the greatest hindrances to successful sanitary work is the inefficiency of local officials. To overcome this it is provided in New Jersey that after January 1, 1905, no local board of health may appoint any one as health officer or sanitary inspector unless he has a license from the State Board of Health. The state board is to determine fitness by examination, and is to issue licenses for health officers and for three classes of sanitary inspectors. The third class inspectors may serve only in townships, the second class in municipalities other than cities, and the first-class inspectors are eligible for appointment anywhere in the state. In a number of states the attempt is made to educate health officers and unify sanitary work by means of associations or conferences. In Indiana ['03 ch.83 §6] it is made a duty for each local board to be represented at conference



called by the state board and the expenses of the delegate are to be paid by the local government represented. In New Mexico ['03 ch. 102 §3] and Texas ['03 ch. 114] the central sanitary authority has been given a new duty in the supervision of the sanitary conditions in railway cars and sleeping coaches operated within the state.

In most of the thickly populated states provision has long since been made for the establishment of a local sanitary authority in cities, townships and counties but some of the western states were till 1903 still unprovided with local boards. In Nebraska ['03 ch. 62], where the county commissioners were practically a board of health, it is now mandatory that the county commissioners shall establish a board of health of which one member shall be a physician, though the commissioners still retain their legislative power. In Arkansas ['03 ch. 42] the county judges may appoint a local board of health. In Arizona ['03 ch. 65 §6] the county board consists of the chairman of the supervisors, the county attorney and the superintendent of health appointed by the supervisors. In Oklahoma ('03 ch. 5) it consists of the superintendent, a physician appointed by the territorial board, a physician appointed by the county commissioners and the chairman of the county commissioners. In Oregon ('03 p. 82 §8) the county board consists of the county judge and the county physician, or if there is no county physician, of the county judge alone. The county board in Arizona has legislative power, but not in Arkansas, Nebraska, Oklahoma or Oregon. In Washington ('03 ch. 65) the county board already provided for was given authority to make rules in regard to contagious diseases, but these must be approved by the State Board of Health. The Arizona law ('03 ch. 65 §15) provides for municipal boards of health to consist of two members of the city council to be appointed by the mayor, the city engineer and the health officer who is appointed by the mayor and council.

**VITAL STATISTICS.** So far as state legislation is concerned there has been very little progress during the past two years. In fact there has been some regression, for Illinois, which in 1901, adopted an excellent law for the registration of vital statistics, in 1903 ('03 p. 315) destroyed its value so far as the registration of deaths is concerned by repealing the clause which required a permit before burial. In Arizona



('03 ch.65 §36-41) the health officers of cities and the superintendent of health of counties are made registration officers and physicians and midwives are to report all deaths and births, and householders and parents are also made responsible for the reports of births and deaths. The local health officer is to send a certified copy to the county superintendent of health and the latter is to report quarterly to the territorial superintendent. A similar law was enacted in Oregon ('03 p.82 §11-12). Texas ('03 ch.135) added the registration of vital statistics to the duties of its "quarantine" department and the name of the latter was changed to the Department of Public Health and Vital Statistics. The act is not a good one for it merely provides for the returns of births and deaths by midwives and physicians, and does not require a permit for burial. Most of the other acts of the year relating to this subject deal with minor matters. In North Dakota ('03 ch.205) the law was made more explicit in many particulars and where formerly there had been one registration officer for each county, one is provided for each township or county district. In Maine ('03 ch.203) provision was made for the recording and printing of old records previous to 1892.

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### SLEEP.

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Were I a girl and wanted to be beautiful at forty, I would have eight hours sleep out of every twenty-four, beau or no beau. I would tell the gay lotharios that I would rather have muscle and roses at forty than wrinkles. The most critical period among males is between the years of seventeen and twenty-two.

Sleep is Nature's trial balance, and if the balance is not struck daily the difference must be carried over from day to day—from week to week—month to month—and year to year, until weakened faculties and disease square the account. Stop and think, in this strange, curious somnambulism we call life, Nature is the only thing of which the mind can conceive that conducts its affairs with unswerving justice. It opens an account with every life at the cradle and closes it at the coffin, and the life account must be balanced. If its laws have been violated and disregarded, an early settlement is the result. It



may not take the life to settle the debt, but it will take the sight, the hearing, the vitality, or it may take its pay from all the faculties alike. If they have been obeyed its appreciation is shown by extending the term of life and keeping the faculties in natural and perfect condition.

It is better to sleep upon the right side because the orifice that empties the stomach is on that side. However, to make sleep restful and gain its highest reward, a comfortable position is probably of most consideration.

But few people attach enough importance to the sanitary condition of the bed room. One person can render all the air in an unventilated bed room entirely unfit to breathe, in eight minutes.

Growing plants, decaying fruits, impure and standing water, should all be eliminated from the bed room.

It would be far more healthy to sleep in a stable with the stock than in a room filled with tobacco smoke, or in which there is a cuspidor containing the soggy stumps of cigars, cigarettes and saliva.

There is no time during the twenty-four hours when pure air is so necessary as during sleep. It is then that the building and repairing process is in most active operation. The blood is flowing to the lungs in a solid stream to be purified by coming in contact with the air we breathe. If it meets impure air it must in disappointment return and do its building with the kind of material furnished.—Perfect Health.

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### **RUNNING.**

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There is but one better exercise known than walking. That is running. A dog or a horse will go all day on a brisk trot. The deer or antelope can run forty-eight consecutive hours, and many men have attained strength and lung capacity enough to run from eight to twelve hours without undergoing much fatigue. A man has more lung capacity, according to his size than a dog or a deer. His lack of endurance is because of his unnatural habits, his failure to exercise, and his unnatural food and unnatural beverages.

He has over 725,000,000 of air cells in his lungs, but he does not use one-third, probably not one-tenth, of them. He



has 2,500,000 holes in his skin called pores, through which he also breathes or should breathe, but he wraps himself in so many clothes that this great purpose of nature is almost entirely defeated.

Even the women doing housework who thinks she is all tired out, would find herself a different woman if she should pack the dishes into the sink immediately after breakfast, leave them there, and go out for a half-hour's brisk walk every day. It will do no harm to call for a moment on a neighbor if the neighbor lives far enough away. You have no time. Then take time.

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**The State Board of Health have, at a great expense, compiled and published a new Medical Roster of licensed physicians now practicing in the state. These books, neatly bound and containing 150 pages, are now ready for distribution. All physicians desiring a copy will be supplied with one on receipt of 25c to cover postage.**

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The next examination of the State Board of Health will be held on the 19th, 20th and 21st of September, 1904, in the St. Louis College of Physicians and Surgeons, 2600 Gamble street, St. Louis, Mo. The examination will begin promptly at 9 a. m., all applicants being required to be present on the morning of the first day.

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The executive committee of the State Board of Health have publicly pledged themselves to prepare a strictly Board of Health bill for the coming legislature, a copy of which, when completed, will be furnished each County Committee. The law makes it the duty of the State Board of Health to recommend such needed legislation or suggestions to the legislature to better the sanitary conditions of our state. Having been in this active service for nearly four years, we are prepared to suggest some needed legislation along the lines above indicated and we hope before the election of members to the next General Assembly, that they will be thoroughly familiarized with these important matters so they will be better able to handle the subject; soliciting the co-operation of all physicians to this end. The bill that we will prepare will probably appear in a future issue of this Bulletin.



# **BULLETIN**

## **OF THE**

# **MISSOURI STATE BOARD OF HEALTH**

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**SEPTEMBER, 1904.**

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### **SCHOOL SANITATION.**

The subject of "School Sanitation" has been discussed from various sources by various states but the phase which we will discuss at present is the inadequacy of the laws of the State of Missouri regulating sanitation. Doubtless, if the question was asked of the majority of school children in our public school today, "What is school sanitation?" they would not be able to give a satisfactory definition. When we consider the grouping together of children in great numbers, all of different home environments, without a proper knowledge of sanitatiton, it is an easy matter to see how an injustice may be done a great per cent of these children in school. If an investigation should be made of the schools throughout the country and small villages and even in the cities, it will be found that the rooms occupied by school children are greatly over-filled and that the breathing space is inadequate for the health of these children. The teachers of these various rooms are likewise uninformed as to many of the needs of the children. You will find by reference to statistics that there is a great per cent of diseased families infected with tuberculosis as well as many other infectious diseases which are in attendance at school. Some of these children may have a disagreeable cough, some may lack proper cleanliness and if jammed into a crowded room, then the conditions are rendered such that other children who may



be of feeble constitution are soon infected with the disease germs and the development is an easy matter. We will often go into school houses and find them at a high temperature and again we will visit the rooms and find them cold. These children are allowed to go out and play in a violent manner and then come back in the room and being quiet, it renders them liable to coryza, and if la grippe is raging, its development is often the result.

In taking a retrospective view of the laws of our state, as we are often called upon to do, we find that there is absolutely no protection to our school children; not even in the construction of the building nor its location, whether high or low, and the teachers are not even required to make a report to the local Boards of Health and the interest manifested is so limited that it amounts to almost nothing. We feel hopeful that the coming Legislature will give proper consideration to the State Board of Health, who have had abundant experience on this subject, so that an earnest effort will be made to advance this state so that it will be on an equal footing with her progressive sister states; but I am sorry to say that in the past we have not been able by argument or any other influence on the Legislature, to get them to recognize or consider the great good of wholesome laws touching the sanitary interest of the citizens of our state. The school teachers of this state are taught many things and are required by the school superintendent to perform many duties in the school room, but these are absolutely a secondary matter compared with proper sanitation in the school room. I believe that every school district in the state should be supplied with a health supervisor and his duties should be to make frequent visitations to these schools throughout the state, noting any omissions or neglect on the part of the teachers. The reason that there are so many things neglected touching this vital question, is because of the lack of interest being agitated by the public officials. I hope to see the coming Legislature make a complete revision of the State Board of Health law so that the future Board of Health of the state will be properly equipped with good, wholesome laws that they may be better enabled to afford protection to the people of our state both in and out of school. I have taken the posi-



tion before in different medical associations in the state, that the preservation of the life, health, sanitation, hygiene, quarantine and all other questions pertaining to health in the state, is and should be under the supervision of the State Board of Health, and the State Board of Health is and should be composed of active physicians in our state, also every sanitary officer should be a physician and every Board of Health in the state should be composed largely of physicians, because we have had abundant experience in the failures of local Boards of Health, simply on account of the predominance of lay members of the Board. Your humble servant is, and has for some time, been preparing a bill for the coming Legislature, and we hope that when it comes before the Legislature, that every physician in the state will feel it his bounden duty to see his Representative and Senator and request them to lend their influence to the passage of this much needed law.

The amount of money set apart to carry out the work of the State Board of Health is absolutely ridiculous. The idea of the State of Missouri only setting apart ten or fifteen thousand dollars for the biennial period to care for and protect the citizens of our state against contagious and infectious diseases, for the licensing power is a distinct department from the State Board of Health. Many of our states, not equal to Missouri commercially, furnish the State Boards of Health with appropriations ranging from forty to sixty thousand dollars for the biennial period so we want to unite our efforts in this state to better the condition of our Board of Health laws as well as asking for a reasonable appropriation to carry out and enforce these laws and then we will have proper sanitation in this state and we will rank with the best states in the Union. So in conclusion, we ask the unanimous support of the medical profession of this grand old state, who have always been ready and willing to advance her noble cause.

"American International Congress on Tuberculosis to be held October 3rd, 4th and 5th, 1904, under the auspices of the Universal Exposition, St. Louis, 1904; of the American Congress on Tuberculosis, and of the Medico-Legal Society of New York."

Every enterprising physician in the state should attend this meeting



and contribute his mite to this worthy calling. If it is possible to stop or even control this dreaded disease, there should be no pains, labor or expense spared, when we think of the good this means to the people of our country. There are perhaps more deaths from tuberculosis than from all other causes combined; then the wonder is that such an organization as this should not have been promoted long ago and fostered and encouraged. It is claimed that in Missouri last year, there was over forty thousand deaths from tuberculosis alone. If an investigating organization of this character can even offer suggestions and instruction to the people of this state to mitigate the suffering, then indeed they have accomplished much. There is not a doubt in the minds of those who have had experience in this line but what the educational feature in the care of tuberculous patients will have a great influence towards lessening the number of victims of this disease. It has only been a few years past since the agitation of this question and instructing the people how to prevent the transmissibility of this disease; only a short time ago was it known that it was improper to expectorate in public places, and if an organization of this character is able to circulate literature to the general public of our United States, teaching and educating them to observe these precautions, then indeed have they done much towards reducing the number of cases in our respective states. So in conclusion, the Missouri State Board of Health would urge the attendance of the profession of this state as far as possible to this meeting to be held on the above dates.

The State Board of Health will hold its next examination in St. Louis, Mo., on the 19th, 20th and 21st of December at the Marion-Sims Medical College (now the St. Louis University). All applicants are required to send their applications to the secretary's office prior to the examination.

The State Board just closed an examination in St. Louis, Mo., September 19th, 20th and 21st. About fifty applicants appeared for examination, including midwives.

*The State Board of Health have at a great expense, compiled and published a new Medical Roster of licensed physicians now practicing medicine in this state. These books, neatly bound and containing 150 pages, are now ready for distribution. All physicians desiring a copy will be supplied with one on receipt of 25c to cover postage.*



**TUBERCULOSIS AND ITS PREVENTION.**

By CYRUS L. TOPLIFF.

Medical science claims that the presence of the tubercle bacillus in the lungs is the fundamental cause of phthisis, or consumption.

After several generations of study and experiment, the medical profession of the entire world have finally come to the conclusion that this disease is not amenable to drug treatment; they seem to have directed their attention to discovering some means of destroying the life of the germ in the lungs, in place of removing certain fundamental causes which make it possible for the germ to exist there. The fact that so little progress has been made in the treatment of the disease, would indicate that some of the important conditions of causation have hitherto been overlooked. Some modern medical writers claim that malnutrition is the cause of phthisis, but people suffer from malnutrition, in a severe form, and yet do not have phthisis; in fact, they could not have it unless they had some unhealthy lung tissue especially suited to the development of this germ.

The tubercle bacillus requires an unhealthy tissue and a certain amount of moisture to favor its development, and the lungs are most frequently infected because they are seldom fully developed. This is due to the fact that the apex or top of the lung is seldom filled with air, and consequently the tissue in that part of the lung becomes weak and unhealthy—usually the result of improper breathing. When this microscopic vegetable germ becomes established in the unhealthy or diseased tissue of the lungs, no drug has yet been discovered which will stop its rapid growth. Unhealthy tissue is absolutely necessary for its development. A person with active, healthy lungs can inhale these germs, and will experience no harm from them. The facts herein described explain the leading and fundamental causes, which become operative when other concomitant and requisite conditions are present.

It is not the germs which make *all* the trouble (they are only an accidental condition—merely like a scavenger that lives on diseased tissue); they are only active because of a weak condition of the tissues, resulting from various causes. Of course, phthisis could not exist without the unhealthy tissue to favor its development. The unhealthy tissue



in the lungs could not exist unless there was a cause for it, which condition usually results from an undeveloped state of the lungs, although the same condition could be caused by an attack of pneumonia, or grippe, and from other causes. Even if the germ has the unhealthy tissue favorable for its development, the disease can progress but little, unless the vital force of the patient has been greatly impaired, as a result of mental or nervous strain. Therefore, *the disease cannot be caused by the germs, unless the necessary accompanying conditions are present.* The germ, therefore, is only *one factor* in the cause; the leading fundamental cause being the condition of the mind, which made it possible for the patient's vital force to become so reduced. It is this phase, or condition of causation, which has hitherto been overlooked; and accounts for the unsatisfactory results experienced in the treatment in this disease.

I do not claim that the condition of the mind represents the direct cause of phthisis, but it is without any doubt, the fundamental and most important condition to be considered in the *treatment* of this disease.

Phthisis is made possible on account of the weakness of the motor and other nerves of the lungs; also of the heart, stomach, and any other internal organs which have to do with the proper digestion and assimilation of food. As all the motor and other nerves are controlled entirely by the mind, we must look there for the leading fundamental trouble. If anything goes wrong with the engine or motor power of a large manufactory, so that it does not run in perfect smoothness, or rhythm, the uneven motion is transmitted to every machine in the entire establishment; and if the motor is allowed to continue running out of balance, it will soon be worn out and ruined. Now, the mind is infinitely more sensitive and powerful than any machine motor, and if it has full control of all the nerves in the body, then when it becomes overstrained or excited through worry, fear, or irritation of any kind—either from physical or mental causes—it will be thrown out of perfect balance, or rhythm, and this disturbance will extend through the entire nervous system. If this strain, or irritation, is continued for some time, the mind becomes correspondingly weakened and loses its power over the body, and subsequently all the nerves become similarly affected, and are unable to perform their normal functions.



When the mind is depressed or excited, the action of the heart is correspondingly changed, and the stomach and other digestive organs are affected in the same way; thus preventing the proper digestion and assimilation of food, producing, in time, malnutrition, which accounts for the emaciation which usually accompanies this disease. The motor nerves of the lungs also become weakened, and make it impossible for them to expel the tuberculous matter which has already collected, and which continues to collect with great rapidity for the same reason. With a weak heart, which cannot keep up a proper circulation of the blood, and a weak stomach and digestive organs, which cannot digest and assimilate the food properly, and weak lungs, which have not sufficient power to expel the tuberculous matter, it is no wonder that the pus collects there and the germs multiply, and the patient has an increased pulse and temperature.

Recent tests have demonstrated the fact that when the real causes are corrected, and the action of the heart is increased by a proper massage treatment, the pulse and temperature are very quickly reduced to normal, and will continue to remain so, notwithstanding the fact that the lungs continue to retain large quantities of tuberculous matter for some time afterward. The pulse and temperature will seldom rise again, unless caused to do so by some mental worry or disturbance. Nature will afterward take care of the tuberculous matter remaining in the lungs, just as soon as the motor nerves and tissues of the lungs have acquired sufficient strength to expel it.

The *treatment* of phthisis is, of course, the most important subject to consider. The environment, and conditions of the disease in different patients, are so variable, that no single treatment can be specified for all. The following suggestions will answer for most cases, and are especially recommended for patients suffering from the disease in an advanced stage.

It has always been truly stated this disease was incurable, on account of the patient not having sufficient vital force or nervous energy to resist it. Such being the case, the matter of first importance is to retain all the nervous strength the patient now possesses, and cut off every



influence which could possibly reduce it. Every person understands that if he spends more money than his income, financial distress will surely follow; but most people waste their nervous energies with the utmost extravagance, and then seem surprised that they should experience any nervous weakness as a result.

When a motor machine does not run properly, the first thing to be done is to put every part of it in perfect balance, so that it will run smoothly. The same rule applies to the human body. When the mind, through mental irritations, is thrown out of balance, then the whole body is correspondingly affected and the first thing to do is to restore it to a rhythmic condition. To do this, the patient must be taught how to think, breathe, and act in a rhythmic manner.

Some physicians have met with most pronounced success in treating incipient cases of phthisis by deep, rhythmic breathing. This favorable result is not due entirely to the fact of opening the air cells and introducing fresh air into the lungs, but to the additional fact that the patient, in breathing rhythmically, acquires the habit, more or less, of thinking and acting in a rhythmical manner, which gives great rest to the mind and all the nerves of the body. If the patient is suffering from the disease in an advanced stage, he should be given a large, sunny room, and the windows should be kept wide open, both day and night. He should be carefully instructed as to the real cause of his condition, and it should be impressed fully on his mind that his recovery will depend largely on his own individual efforts to control his thoughts and mind, so as to eliminate the elements of worry, fear, anxiety, or anything which will irritate the mind or waste his nervous energy. He should be taught how to practise slow, deep rhythmic breathing. He should not commence by counting slowly six or eight for each inhalation or exhalation, because he may not at first be strong enough to do so; but instruct him to count as many as he can and breathe with perfect ease, and then continue to increase the number as his increased lung capacity and strength will permit.

Members of the family should not ask him how he feels; and if he coughs, should make no remarks about it whatever—if he wants to cough,



let him do so peacefully; it is a necessity, and he cannot help it. Do not allow well-meaning but ill-advised people to tell him about their own troubles, or those of their friends—he has troubles enough of his own to consider. Exclude all visitors who would be liable to excite or irritate him in any way. Do not urge him to take a walk on some fine, sunny day—let him have the fresh air and sunshine without active service; it will be time enough for him to take a walk when he has recuperated his physical and nervous strength sufficiently to do so without experiencing any reactionary weakness afterward. Massage treatment will make up for lack of exercise. Save his physical and nervous strength in every way possible. Many patients are kept in a continual state of worry about their pulse and temperature, and therefore, it is best to ignore that condition as much as possible, especially when in presence of the patient.

In addition to these suggestions, the proper kind of massage treatment will be found of great value in assisting the heart to do its work, and in promoting proper circulation of the blood.

Limited space will not allow an extended description of massage treatments especially suited for this disease, but, in all cases, the massage manipulation should be given firmly and in perfect rhythm, but very slowly; no strokes should be given on any part of the body more rapidly than the normal pulse rate. If strokes, with a heavy pressure, are made more rapidly than the normal pulse rate, then an abnormal pressure is produced on the walls of the veins and arteries, which will cause additional congestion, and consequent irritation of any inflamed parts of the body. In order to cure phthisis, it is of the utmost importance that the mind be relieved of all irritations. In some cases, even a painful tooth is sufficient to irritate the mind and cause it to be out of rhythm, not that any single irritation will do so much harm, but the combination of a number of mental or physical irritations is sufficient to cause the condition which makes phthisis possible, and also prevents its cure.

Always remember that what the patient needs most is perfect quiet and rest for the mind until it can recover its normal strength and be able to fulfill its natural functions.

If the medical profession will direct their skill and energies to the



treatment of this disease, on the lines herein described, their efforts will soon result in the discovery of new truths and new treatments; and in a comparatively short time, consumption will be controlled and cured as easily as any other disease.—*Scientific American*.

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### **AN ADDRESS ON SANITARY WORK.**

BY HON. THEO. BRANTLY, MONTANA.

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At the opening of the first meeting of the health officers of Montana, Theo. Brantly, Esq., made an address which is so valuable that we abstract from it as follows: "It is impossible to divorce the administration of the law, no matter what branch may be under consideration from the interested observance and study of the professional lawyer. We all have our families, the enemy you are combatting is the common enemy of mankind. Disease and death invade every household. It seems almost incongruous when we look at our surroundings that there should be a Board of Health in Montana. It would seem there is no necessity for it, but wherever man goes he carries with him the seeds of death. He finds them in the air he breathes, the water he drinks; he is infected by the insects which fly around him, the taint is in our beautiful valleys, among our mountains in a multitude of forms. In ancient times sanitation was dependent more or less upon the church. Up to 1875 there was not known to English speaking people any such thing as a system of law on sanitation. Under the common law everything which interfered with health or comfort was a nuisance treated by injunction. The remedy was invoked only after the evil had occurred. Parliament took up the matter, and in 1875 systematized the law on sanitation. The first sanitary system created by law in the United States was in the city of New York in 1866, and the earliest law toward sanitation was enacted in 1796 by Congress, to regulate bills of health upon incoming and outgoing vessels in our harbors on the seacoast. The first state to pass a general statute was Massachusetts in 1869. Next, Congress in 1879 created a National Board of Health, its purpose being to exercise the police power of the United States government within the limits of the Constitution as applied to the intercourse with other countries and between the various



states, to prevent the introduction of infectious and contagious diseases from foreign countries. It is astonishing to how many evils in the form of disease man is subject. Naturally the epidemics of cholera, yellow fever, etc., should have roused the whole country to activity to the subject of sanitation, prevention, and cure, yet many states still are wanting in proper laws upon the subject. Many are very crude, laws only executed under stress of circumstances during an epidemic, otherwise a dead letter, as has been witnessed in the past. As in Memphis, once one of the most unhealthy cities, now one of the most healthy. The people lost thus are but a small percentage of those lost because of a lack of proper sanitation, and were the proper laws enacted, a large proportion of deaths would be prevented.

The Legislatures appear to desire to relegate the authority to look after the health of the community to local officers who are not accountable to any superior officer or department of the state government. For instance, the Board of County Commissioners constitutes the County Board of Health. The municipal corporations authorize boards of health in the cities and towns. Instead of finding these local boards acting in harmony, they are in conflict. Further, we have seen unseemly conflict as to the liability of a particular municipality for the expenses attendant upon an epidemic of contagious disease. A private citizen has been left to suffer while the local authorities were contesting as to who was responsible. These powers should be adjusted so there could be no conflict, systematized and regulated as are other branches of the government. This should be one matter to be considered by this meeting.

Next as to the expenses of such work. While under the present law your efforts are hampered, yet such meetings as this will disseminate knowledge among the people and create a public sentiment which ultimately will accomplish the purposes for which you have assembled.—*Montana Health Bulletin*, August, 1904.

### **IMMUNITY FROM CONSUMPTION.**

BY C. L. TOPLIFF.

It is a well-known fact that tuberculosis is due to the tubercle bacillus, a vegetable micro-organism which is motionless and helpless, but under the proper conditions can grow and reproduce itself very rapidly. It has been estimated that in some cases two or three thousand millions of bacilli are discharged in the expectoration from a single case of consumption in the course of twenty-four hours. If such sputum lodges in places where it afterward dries and becomes pulverized, as on the street, floor,



carpet, etc., these germs are liable to float as an invisible dust making it an easy matter for one to inhale them into the lungs. Every one does inhale them, but if the lungs are fully developed and in a healthy condition the germs will not prove harmful. The tubercle requires an unhealthy tissue and a certain amount of moisture to favor its development, and the lungs are most frequently infected because they are seldom fully developed in the human being and especially in women. This is due to the fact that the top of the lung is seldom filled with air and hence the tissue in that part becomes weak and unhealthy for the want of use and makes the best place for the rapid development of this germ. The medical profession have failed to find a cure for this disease, and now admit that the only thing to be done is to give plenty of fresh air and adopt such measures as will prevent the spread of the disease. Why not make all children and others immune to the disease by teaching them to breathe properly, thus developing every part of the lungs and making it impossible for the tubercle to live therein?

When disease is once established, it is difficult to cure it because the patient's vitality is low, he has not power to resist the disease. Small or unused lung capacity means low vital energy, but when the capacity is increased the vital power is increased and the person has greater power to resist disease.

The common nervous breakdown among children as a result of overwork or mental strain would seldom occur if the lungs were used properly. The development of the lungs is simple. If all physicians would instruct their patients how to breathe and if boards of health and of education would compel all the schools to have the scholars rise in their seats and practice breathing exercises for a few minutes every morning at the opening of school and also tell them to practice these exercises on rising in the morning and at other times during the day, the result would be that their lungs would soon be in a healthy state and they would probably breathe properly during the rest of their lives. Were this rule carried out, new cases of consumption would soon be greatly reduced and in a short time the disease would be eradicated.

No elaborate exercises are required. Stand erect, with the hands at the side in line with the legs; take one long full breath, hold it for a second, then take another quick short breath on top of the other breath, and hold all for a second longer, then gradually exhale through the nose. All inhalations and exhalations should be through the nose, not the mouth.

There are other breathing exercises which will develop the lungs, but this is the best of all. Persons suffering with this disease in an



advanced stage should practice deep, long breathing constantly. It will give the sensation of a "breath of fresh air." It is impossible for any one to contract consumption who will completely fill the air cells of the lungs with fresh air several times a day.—*Scientific American*.

### MEDICAL INSPECTION OF THE PUBLIC SCHOOLS.

BY JAY F. SCHAMBERG, M. D.

In a lecture before the school teachers on this subject said: The fact that more than three thousand children in the schools of New York had been found with contagious diseases of the skin, and nearly four thousand with diseases of the eye, made it imperative to the health and welfare of school children to have regular inspections by competent physicians.

There can be no doubt that schools and kindergartens are great distributing centres of contagion. It is a matter of common observation that contagious diseases, such as scarlet fever, diphtheria and the like, increase after the opening of the schools and decrease after they close for the summer vacation. The congregation of children in large numbers and their close association for several hours each day offers a most fertile opportunity for the transmission of infection.

That children commonly attend school during the developmental stage of various contagious diseases is evidenced by the statistics of the New York Board of Health. In 1901—and the figures of this year are the only ones I have at hand—there were excluded from the schools in New York forty-eight children affected with measles, thirty-four with diphtheria, fifty-two with scarlet fever, 158 with whooping cough, 653 with mumps, and 342 with chickenpox.

Not only are such patients apt to give the disease to a considerable number of school children, but each child thus infected will carry the disease home and transmit the same to brothers and sisters.

Contagious diseases of the skin and eyes are extremely common in the public schools. Among the more transmissible affections of the skin which are apt to be encountered among school children are ringworm of the scalp and contagious impetigo, the itch, favus and pediculosis or uncleanliness of the head.

All of these affections are readily communicable by such contact as would take place between school children. While they are not directly dangerous to life, they may produce serious discomfort, and some of them may persist for months, or even years. A child thus afflicted is liable to social ostracism, and may have its education seriously interfered with.



In the city of New York during the year 1901 there were temporarily excluded from the public schools 3801 children suffering parasitic diseases of the scalp and seventy-eight from similar diseases of the body; besides 1106 children with other contagious skin diseases. Most of these children were permitted to resume attendance after being placed under treatment. A trained nurse is assigned to certain schools to supervise the treatment of unclean heads and like diseases.

Philadelphia has been far behind in the matter of safeguarding the health of its school children. New York is much in advance of us in this respect. The Director of the Department of Health of this city is fully awake to the situation, and has completed the organization of the medical corps so that inspection of school children will very shortly begin.

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### ADULTERATION.

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The crying evil of the day is the mania for adulteraing everything which finds its way to market. Animal foods are badly adulterated; foods for our own consumption, fertilizers, formaldehyd, paints and oils. This from the North Dakota *Farmer*.

The *American Cultivator* says: "The increase of adulteration in grass seed is at last attracting the attention of the Legislature. A bill has been brought before Congress aimed especially at the frauds in Kentucky blue grass, orchard seeds and the various clovers. The seed swindler is the meanest kind of a cheat. FoFr a few dollars extra gain he causes perhaps ten times as much loss to the man who uses the seed, which produces a light crop or introduces harmful weeds. For instances, Kentucky blue grass seed is mixed with Canadian blue grass, half and half, and it is impossible to detect the adulteration save by an expert and a magnifying glass. The Canadian blue grass is worthless in comparison as a pasture, and with it the obnoxious Canadian thistle has been introduced into this country. Within the last seven months it is alleged that over 850,000 pounds of Canadian blue grass seed has been brought into this country, all for the purpose of adulterating Kentucky blue grass. The adulteration of orchard grass and red clover is carried on to the same extent as the blue grass. Meadow fescue, English rye grass and Italian rye grass are used to adulterate orchard grass, while yellow trefoil is used to adulterate red clover and alfalfa. Sometimes the inferior seeds added are first killed by heating. In that case no foul growth is introduced, but there is a poor stand, and the farmer blames the weather, because, as he supposes, the seed failed to catch. The whole contemptible business



should be stopped by national law. This bill and the Brownlow Good Roads bill both deserve the support of the farmers."

The mention above of formaldehyd is further confirmed. "Many farmers treated their seed wheat with formaldehyd and found it badly smutted in the fall. This was due to the fact that the solution of formaldehyd contained only 20 to 30 per cent. instead of 40 as it should have. Do not buy this article of any one unless he can show a guarantee that it contains not less than 37 per cent. of formaldehyd. Treat wheat for smut, but be sure you have a pure article of good strength."

### THE MEANING OF A COUGH.

It is comparatively seldom that a cold taken in August results in bronchial irritation. Such colds usually manifest themselves in the digestive apparatus. With the return of cold nights, colds become not only more common, but manifest themselves in the head and in the respiratory apparatus. A cough which continues for any length of time should always be looked upon as dangerous, and lead its subject to secure careful medical examination and advice.

The following excellent outline is from the *Denver Medical Times*:

All coughs are either moist or dry. A moist cough is nearly always paroxysmal; expectoration is usually most abundant in the morning. This cough, like all others, is often nearly or quite suppressed toward the fatal end of most grave diseases, owing to carbon dioxide narcosis.

Anatomically, most coughs are either pulmonary or bronchial. The pulmonary class is marked by more or less percussion, dullness, and by bronchial breathing. The bronchial class is marked by soreness, oppression, pain and irritation in the upper sternal region, and by moist double rales.

A dry cough is usually short, sharp and hacking, though sometimes paroxysmal. Reflex forms are generally quickly relieved by treating a local cause, or they may be produced artificially by irritation of the affected locality.

Dry bronchial coughs are tight and harsh, with sonorous and sibilant rales.

Laryngeal coughs are hoarse, harsh, deep and rough, with altered voice and laryngeal pricking, burning and soreness, and a constant desire to clear the throat.

The pharyngeal cough is accompanied by a pricking feeling in the throat or feeling of fullness.



Nasal coughs are marked by local signs and by "hawking" down mucus from the posterior nares.

The faucial cough is usually worse on lying down, and is attended by a tickling in the throat.

The oral cough is due to irritation of tongue or teeth.

Aural coughs are due to irritation of the auriculo-temporal branch of the fifth nerve, and may be accompanied by considerable expectoration.

Pleuritic coughs are generally painful, with quick and painful breathing, and often friction murmurs or flatness.

Pressure on the respiratory tract by tumors or pseudo-tumors excites a cough, which is laryngeal in character.

A uterine cough is hacking, very painful and tiring, and repeated two or three times in succession. It is excited by the least irritation.

Nervous coughs deserve considerable attention. They are periodic or paroxysmal, usually high-toned, quite variable, slight or prolonged, and painful. Two important general characteristics are that they disappear entirely during sleep, and are accompanied by no secretion whatever. On auscultation there are sometimes wheezing, rattling, scraping sounds, and there may be spasms, convulsions or aphonia.—*Extract.*

*The State Board of Health have, at a great expense, compiled and published a new Medical Roster of licensed physicians now practicing in the state. These books, neatly bound and containing 150 pages, are now ready for distribution. All physicians desiring a copy will be supplied with one on receipt of 25c to cover postage.*

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# BULLETIN

## OF THE

# MISSOURI STATE BOARD OF HEALTH

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### A REPORT OF THE STATE BACTERIOLOGIST TO THE MISSOURI STATE BOARD OF HEALTH UPON AN EPIDEMIC AT WIEN, CHARITON COUNTY, MISSOURI.

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An epidemic of rather severe propositions broke out in and around Wien, Chariton County during the past August and continued during September. We were not informed of its existence until there had been quite a number of deaths. Wien is a small village of about six or seven houses surrounded by a productive and thrifty German Catholic community. The area involves about eight miles square.

During these two months Drs. W. J. Billeter and C. O. West reported 126 cases with 22 deaths. A few other cases occurred within this community but are not included in this report.

The following description of the last case treated by Dr. W. J. Billeter is fairly typical. The patient had not recovered when the description was written up. "James McSparren," aged seventeen months, male; white, began with diarrhoea on September the sixth. Had several watery stools on the first day and more on the second day. I saw him September 8th, or third day of the disease. Pulse 110; respiration 25; temperature 101½ F. Tongue slight yellow coating. Bowels moving quite often, sometimes thin and watery; at other times containing only mucous and blood. Number of stools in the first twenty-four hours twenty-four times or more. Pain



before evacuation well marked, child often crying just before bowel movements. No nausea or vomiting at first. The following is the number of evacuations for each day since I first saw him:—

Sept. 8	9	10	11	12	13	14	15	16
Dejections	24	20	15	12	12	16	13	14
Sept. 17	18	19	20	21	22			
	15	20	16	11	13	8		

Mucous and blood were never entirely absent from the stools. No tympanities at any time. More or less nausea for several days, now more marked just before his bowels move. Temperature has never been above 102 F, but has been ranging from normal to 100½ F most of the time. Pulse ranges from 100 to 120.

Treatment:—Calomel 1-10 gr. every hour for eight or ten doses first day. Elix. lactopeptine in teaspoonful doses combined with bismuth subnitrate in 10 gr. doses every three hours; also syrup, rhei every three or four hours second day. On the morning of the third day or September 10th at 9 A. M. gave ten cc of antidyenteric serum; again another ten cc at 9 P. M. same day. Also have used Rectal and colon irrigations of normal salt solutions almost every day. Have used intestinal antiseptics salol, sulph, carbol, zinc, acetozone. For pain and tenesmus used Dovers powders, and starch and tinct, opii following irrigations. Gave also an occasional dose of ol. racini with four or five drops of turpentine. In former cases used both mineral and vegetable astringents but never seemed to get the results desired.

Diet:—Egg albumen, broths, boiled milk with lime water, egg-nog, etc.

In some of these cases the stools became as frequent as 200 in twenty-four hours. The temperature was not high in any case; in some it was subnormal. The patients all had a more or less apathetic appearance. One case developed a marked jaundice before death. Three children developed such nervous systems as opisthotonos, narrowed pupils, coma, etc.

Dr. Billeter gave a partial list of the number affected in each family, their ages, and ages of those who died:



NAMES	Number in Family	Cases in Family	AGES	Deaths	Ages at Death
Cortes	7	3	2, 7, 14	1	2
Abrahams	8	7	50, 43, 18, 15, 12 8, 10	2	12, 8
Venneman	5	1	19		
Bagley	4	1	13		
Bange	6	1	13		
Kahs	6	4	12, 8, 6, 11 mos.	1	11 mos.
Bixemans	8	6	.....		
Kemphaus	6	3	4, 8, 14 mos.	1	14 mos.
Steffes	8	8	.....		
Nellesen	6	5	17, 10, 8, 3, 60		
Allbenasius	7	3	2, 4, 6		
Rogers	5	2	60, 3 mos.	1	3 mos.
Heltzs	7	1	3 mos.		
Hanngessier	4	2	21, 63		
Biegel	3	1	65		
Huber	7	3	3, 8, 10		
Stevens	6	3	20, 24, 60		
Niemeier	4	3	27, 3, 14 mos.	1	3
Bauer	7	4	50, 11, 3, 8 mos.	2	3, 8 mos.
Bange	9	5	6 weeks, 13	1	13
Hingle	6	4	2, 17, 13, 55		
		4	.....	1	8 mos.

Four of these cases were treated part of the time by other physicians. Dr. C. O. West reported 52 cases with eleven deaths. He gave the ages of 44 in this proportions. Since reporting the 44 cases he had eight more cases, of which two died, the ages not being reported. Among the above 44 cases three deaths occurred in 15th year, the remainder being younger.

The total death rate was a little above 17 per cent. However since none above fifteen years died, we find that the death rate was very high among children. Thus eliminating the last eight cases and two deaths reported by Dr. West, because he did not state the ages, we find that the death rate under eighteen years was about 29 per cent.



I visited the locality at two different times toward the latter part of the epidemic. On each occasion I could only remain one day. Upon each visit I collected a few stools and drops of blood from typical cases. The stools were placed in bottles sterilized by dry heat. The drops of blood were taken from the lobe of the ear and allowed to dry on sized paper. Samples for the bottles were taken only from bloody mucous stools past during my visit.

Since the symptoms were very similar to those described in the attacks of dysentery in which cases Shiga succeeded in isolating a typical bacterium which he demonstrated was cause of the disease, which was subsequently corroborated by Flexner in the Philippines, as well as others in Europe and America, I was impelled in a small way to search for such an organism in the patients suffering from this epidemic at Wien. I select a small partical from each of the stools with which three agar-agar plates were made in each case. The agar plates were placed in an incubator for forty-eight hours, after which stab cultures into glucose litmus agar were made from certain colonies. At the same time for comparison agar plates were made with a culture of the Shiga bacillus, I stabbed those colonies which most closely corresponded to colonies of Shiga's bacillus. Since the different members of the dysentery groupe do not ferment glucose media, at least not abundantly. Those which fermented glucose probably were members of the colon or proteus groups. Thus from six stools I made 37 cultures. Of the 37 cultures made, only five did not ferment glucous. These five cultures were all obtained from one case, a boy 17 years old, sick four days when the stool was passed. He recovered in six days. These Bacteria were rod shaped and about the size and shape of the typhoid bacillus. When grown on agar they were not motile, but were motile when grown in beef tea. They stain easily with anilin dyes, but not with Grams's stain. They did not coagulate milk, nor liquify gelatin. No indol was produced in fourteen days. In beef tea a heavy cloude was formed, no surface scum and little deposit. On agar slant a thin white glistening translucent growth was produced. Agar colonies which at first were white and translucent, later became slightly brownish. The colonies were round, flat and finely granular, the granules being courser toward the center. While similar in many



characteristics to the Shiga bacillus, this germ did not seem to be pathogenic or toxicogenic for guinea pigs. One cubic centimetre of a beef tea culture incubated at 39 degrees C for twenty-four hours was injected into each of four guinea pigs, weighing about 250 grams. Two of them received the injections intraperitoneally, and two subcutaneously. None of the guinea pigs seemed to suffer any ill results from the inoculations. Moreover this bacterium was not agglutinated by blood in dilutions of 1-10 from the patient which had passed that stool nor by the blood of five other patients in later stages of the disease or having recovered from it. A dysenteric antitoxine, which was claimed to be produced by means of several different varieties of dysentery bacilli; did not agglutinate this bacterium in dilutions of even 1-10.

The Shiga bacilli mentioned above will almost immediately agglutinated by this dysenteric antitoxine in dilutions of 1-10. Blood from some of these patients was tested upon this Shiga bacillus. For this purpose blood was selected from a boy sick ten days; a girl three years old sick 14 days; a girl seven years old sick 24 days; and a girl ten years old convalescent for 10 days. In none of these tests was the Shiga bacillus agglutinated in the least by dilutions 1-10 in four hours.

The epidemic continued for about eight weeks. We could not discover the method of transmission' although we suspected that it was carried from house to house by visitors. In many cases however, members of the families declared they had not visited any families suffering from the disease. Children did not attend church after the epidemic broke out, and very few adults. The funerals of the dead were not attended by children, and were more or less private. We insisted that visiting of the sick should be stopped as much as possible. Flies were very abundant at this time. Judging from what I observed in some families of six or eight members crowded into small houses of three or four rooms, there are abundant opportunities at times for the disease to be transmitted through the family by these pests. The kitchen was in many cases adjoining the sick room without even a screen door separating them. However many of the houses were a mile or more apart. Flies could hardly have carried the infectious agent this far.

The afflicted families were told to immediately disinfect



these stools with carbolic acid or chloride of lime and then bury them. This was not carried out at first and no doubt carelessly at all times.

Judging from a hurried inspection of the locality, and as a result of the attending physicians information, I was led to believe that those families which followed ordinary hygienic laws of eating and drinking were not affected.

Although this was undoubtedly a form of dysentery similar to that found elsewhere and caused by some member of the Shiga-Kruse groupe, I was unable to demonstrate such in the few cases which I investigated in this epidemic. Moreover blood from these patients did not agglutinate Shiga bacilli, which should have been the case where the Shiga bacillus, or members of the same group etiological factors in these cases.

Some bacteriologists at different times have suspected that members of the colon or protus groups of bacteria may under certain conditions of climate and unsanitary conditions of living become virulent and thus cause cholera-infantum and dysentery. There is this possibility in an epidemic like this where one cannot find members of the Shiga-Kruse group nor get agglutinations of these germs by means of the patients' blood. However this side of the epidemic was not investigated, owing to the limited facilities at my disposal.

Undoubtedly the disease was caused by a highly infective organism which was probably in the tools of the sick and which may remain for quite a length of time after recovery. For this reason we advise the people at Wien to disinfect the public privy vaults by emptying several barrels of lime into them at different intervals this fall. We have also advised them to guard against contamination of their drinking water. However since sanitary regulations cannot, or rather are not thoroughly carried out in a farming community, there is a possibility that this same disease may break out again next year. Should this unfortunately occur, we hope to be in a better position both for investigation and assistance to the people.

A. J. DETWEILER, State Bacteriologist.



### THE COUNCIL ON MEDICAL EDUCATION.

With the appointment of the Council on Medical Education at the Atlantic City session, the American Medical Association again voices its interest in the subject of medical education, and commits itself to an active participation in the efforts which are being made to elevate the standards of medical education in this country. It is interesting that this step should have been taken at a meeting held within a few days of the death of the founder of the Association, whose dominant idea in proposing the organization of the profession, over fifty years ago, was the improvement of medical education. The Council is to consist of five members, appointed by the President of the Association, and its functions are defined as follows:

First, "to make an annual report to the House of Delegates on existing conditions of medical educations in the United States."

Second, "to make suggestions as to means and methods by which the American Medical Association may best influence, favorably, medical education."

Third, "to act as the agent of the American Medical Association, under instructions from the House of Delegates, in its efforts to help elevate medical education."

The plan to be pursued by the Council was left indefinite, and it will doubtless be its first business to determine what lines of work it will undertake and what its relations shall be to the several other organizations having a similar purpose. Notwithstanding the gratifying advance which has been made in medical education in this country in recent years, as was well stated by the resolutions creating the Council, "the existing standards of medical education are not satisfactory as compared with those of other great powers." The conditions are ripe for a vigorous, concerted movement by all who are interested in the elevation of the medical profession in the United States. In this movement the Association, with its enormous and increasing membership and its thorough organization, may be a factor of great importance. It must proceed, however with due regard to existing conditions, and will do best to co-ordinate its activities with those of existing organizations seeking the same end. Some conditions peculiar to this country are mentioned in the resolutions to which we



have referred, which state that "our form of government makes it impossible, to obtain governmental control of medical education." The numerous medical colleges which have to do with the education of the student and the several examining and licensing bodies which guard the portals of the profession, are creatures of the several states, and beyond the reach of national control. We can not have in this country, therefore, a body like the British Medical Council, which has direct official control of the several medical schools and of their students. In its relations to the American Medical Association, and so to the general profession, the new Council is analogous to the Committee on Education of the British Medical Association, appointed in 1898.

Another matter of importance is the existing of several national associations exclusively devoted to one or another phase of medical education, among them the Association of American Medical Colleges, the Southern Medical College Association, the National Confederation of Examining and Licensing Bodies, and the American Confederation of Reciprocating Examining and Licensing Medical Boards. While the efforts of these associations have not always been as vigorous and effective as might have been desired, nevertheless each of them have special purposes in view, and is especially well adapted to the accomplishment of these purposes. At the same time, they have some lines of effort in common, and much of the ineffectiveness of their previous activities has been due to the unnecessary and wasteful duplication of effort and the lack of co-ordination and co-operation. The idea we have in mind may be illustrated by reference to some of the special acts by which the standards of medical education must be elevated.

There is a general agreement that the preliminary education for admission to our medical schools falls far short of that which the conditions of the time require. What should these standards be? Should the fitness of each student be determined by examination (and if so, by whom), or by the representation of credits from certain recognized preparatory schools? If credits are to be accepted, who shall determine what institutions of general learning are to be recognized for this purpose?

The curricula of our numerous medical schools differ very greatly in the relative amount of time assigned to the several



medical branches, and also as to the methods by which they are taught.

The numerous and rapid changes which have been made in the curricula of our medical schools in recent years have resulted in a sad lack of mutual understanding on the part of the medical schools, and it is becoming very difficult, in many cases, for the officials of an institution to pass intelligently on the credits of a student from another school seeking admission to advanced standing. The same lack of understanding and knowledge, together with an utter absence of any uniform system in the issuing of credits, has made it possible for dishonest students to impose on the officials of a school by the representation of altered or forged credentials, a very ferious abuse greatly in need of correction.

All of these matters belong properly to an organization of those engaged in the actual work of medical education, such as the Association of American Medical Colleges, though it might easily happen that the efforts of this association to advance along theselines would be more vigorous and successful with the prompting and co-operation of a body like the Council on Medical Education.

One of the most obvious needs of the time is some plan by which the numerous medical colleges may be compelled to live up to the standards which they set forth in their announcements. It is difficult to see how this end can be attained without a system of efficient and rigid inspection by an authorized and authoritative official. It would seem that such inspection could best be accomplished by an appointee of the Confederation of Examining and Licensing Boards. First, because the members of this confederation have actual need of the exact information which would be gathered by such an inspector; and secondly, because the examination by such an official, whose unfavorable report of an institution might result in the refusal to recognize its diplomas by most of the state examining boards,, would be mostly compulsory in its effect. Two other items natually come within the province of this confederation. Now that a license to practice can be obtained in most of the states only by passing an examination conducted by the state board, the character of these examinations and the method of their conduct has come to be a matter of great



importance, and it may be safely asserted that the present conditions are far from satisfactory. It is only necessary to allude here to the enormous importance of reciprocity in licensure between the several states.

Another important matter which might properly come within the province of the Council on Medical Education, is the suggestion of some plan by which the large and increasing amount of clinical material in the many hospitals springing into existing in the smaller cities can be utilized for the purposes of practical medical education. There is enough material of this sort to almost provide an internship of one year for every medical graduate. It is only necessary, for the accomplishment of this desirable end, that the several medical faculties should be brought in touch with those in control of these hospitals that they may co-operate with each other. There are many other avenues of effort through which the standards of medical education can be elevated, but along most of these one or more existing organizations are already directing their efforts. What is especially needed at the present time is some means by which these various organizations may be made to co-operate effectively. Such an end could be best secured by a joint conference of authorized representatives of these organizations held under the auspices of the new Council on Medical education. The Association might, of course, endeavor to enforce certain standards of preliminary and professional training by exacting compliance with such standards as a prerequisite for membership in the Association and its constituent societies. With the rapidly changing standards of the last few years, it would be difficult to formulate a list which would be at the same time just and effective. It is questionable, too, whether such an effort would not seriously interfere with that supreme purpose of the Association at the present time, to gather within its membership every reputable and right-minded physician. For the present, at least, we believe that the Association through the new Council will preform the largest service to medical education by the exercise of its moral force and by utilizing through co-operation the forces of the existing organizations to which we have referred.—*Journal American Med. Assn.*



### COLD BATHS IN TYPHOID FEVER.

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THERE has been for some time a growing distrust of the value of the cold bath treatment in typhoid fever. Why this opinion has not prevailed before, the writer cannot understand, for there are many practical objections to it. Besides, the benefits expected from them are often disappointing to those who observe the closets in such cases. We don't wish to underrate the value of hydropathic measures in the management of this disease, for often they are invaluable, but to use the cold bath to the exclusion of all other medical treatment is in the writer's opinion unwise. This opinion is based upon personal experience, and not upon recent literature touching upon this subject. Dr. John McRae, in *American Medicine* has recently published an article which throws a great deal of light upon the relative value of the cold bath and other methods of treatment. He gives a review of 717 cases of typhoid fever treated at the Montreal General Hospital during a period of five years; 439 of these cases received bath treatment, antipyretic medical treatment was given to 148 cases and sponging to 94 cases. It was supposed that the sponging was given to only the mild cases, and they have been excluded from this comparison. The method of cold bath was the same as that used by Brand. His antipyretic treatment consisted of five grains of salol and five grains of phenacetine every four hours. The mortality as given by Dr. McRae is as follows: With the bath treatment it was 10.9 per cent., with the antipyretic treatment it was 9.4 per cent. The complications seemed to be more frequent under the bath treatment. Hemorrhage complications in these cases was 12.3 per cent.; 5.5 per cent. suffered from perforation and 15.2 from delirium. With the antipyretic treatment only 6 per cent. had hemorrhage, 6.8 per cent. suffered with perforation and 14 per cent. with delirium. The author of these statistics also reports that neuritis was much more frequent after the baths. The series makes no marked indication of any form of treatment, save in the bath treatment there are more cases of hemorrhage and neuritis, whereas, in the antipyretic treatment hemorrhage is comparatively infrequent. It is of great practical interest to note the apparent value of this simple treatment which he



styles antipyretic. Five years ago it would have been impossible to have persuaded the medical profession to believe that this simple treatment of typhoid fever would be productive of a lower death rate than the cold bath treatment, but it is observed in medical literature quite often these days that it is, and that the Brand method is becoming less popular and other methods are considered superior. Of course, no very great importance can be placed upon the value of what Dr. McRae calls his antipyretic treatment. Five grains of phenacetine every four hours is a very slight antipyretic. The idea it demonstrates is, that if you leave a patient alone he will do better than if he is treated with a cold bath. The free use of salol in typhoid fever is by far the most rational treatment that has ever been used, but Dr. McRae's method of giving it does not suit the notions of the writer. Five grains of this drug every four hours will do a little good, but a very little. Fifteen grains every four hours is little enough to give in most cases. It is not uncommon in this part of the country to give twenty grains every three hours. This quantity given in powder has an antipyretic effect, besides, its satisfactory effect can at once be seen, it flattens the bowels, checks diarrhoea, cleans the tongue, lowers the temperature and stops delirium. It is unquestionable conservative to state that the morality in typhoid fever cases with the intelligent use of salol and proper feeding and careful nursing ought not to be ever 5 per cent. We have no desire to depreciate the very great value of frequent sponging with ordinary water. They are often soothing and refreshing, but not so with the cold bath. They experience no feeling of relief or pleasure after or during their use. If we were to devote more time and study to each individual case, its wants and needs, rather than follow without the slightest variation one method of treatment, we would often save cases which we now lose. Many physicians, I believe, overlook the importance of little things which have a decided bearing upon the future termination of their cases. The patient, when it is possible, should be humored. He may have diseased notions about things, and it may not be possible or wise to please him, but when you can comply with all of his wishes you are in a position to do the most for him. He may want his room darker or lighter, warmer or colder, it may be too crowded or too noisy, he may object to the odor of certain



flowers or disinfectants, his attendants may not understand him, he may not appreciate their efforts, and, unless they are experts, discord prevails, and a fretted expression is on your patients face. All of these things when combined have a very decidedly bad effect in most cases, and might be altogether the indirect cause of a man's death. These are only a few of the small things I can think of which should always be looked after and corrected in the management of typhoid fever cases. —*Charlotte Medical Journal*.

### WOMAN'S DUTY TOWARD THE HEALTH OF THE NATION.\*

BY S. A. KNOPF, M. D. NEW YORK.

The American woman should find her highest and noblest mission in helping to increase the nation's health. Her first duty is to familiarize herself with the status of the health of the nation of which she is an integral member. She will learn that thousands of useful citizens, of men, women, and children, die annually from preventable diseases, such as tuberculosis, diphtheria, smallpox, alcoholism, etc., that in the State of Massachusetts alone, 4,531 died of tuberculosis last year, and that of the 80,000,000 now peopling the United States nearly 10,000,000 will die of this disease if the present ratio is kept up.

With the increase of the health of the nation there will be invariably a concomitant betterment of the physical condition of men and women in general, an increase in moral, intellectual, and monetary wealth.

Women in nearly all phases of life can aid in this labor toward the improvement of the nation's health—one more, another less, but all can help. Individually they can help by furthering their own health by healthful dress, healthful food, and a simple life. Garments constricting chest and abdomen, hindering the body's physiological functions, must be done away with. Of tight shoes and neckwear the same must be said, for by their constricting influence they hinder the free circulation of the blood. Mothers should, if at all possible, nurse their children themselves, and artificial feeding during the first year should only be resorted to in the rarest instances. To learn to select and to cook good, healthful food every wife and mother should consider one of her most graceful accomplishments.

To live a simple life does not mean to abandon the comforts of modern civilization, to ignore the blessings of modern science, and particularly of modern medicine. It only means to live less artificially, more in accordance with physiological, i. e., natural laws, and obey the

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lessons modern science and preventive medicine have taught us. Thus, instead of giving her adherence to all sorts of fads, some of them denying the existence of disease and proclaiming the uselessness of preventive medicine, hygiene, and the laws of cleanliness, which are the laws of God, the American mother should combat such dangerous doctrines by word of mouth or pen, and above all by example. By leading a simpler life she will no longer be "nervous," or neurasthenic, and consequently will not have to resort to the patent remedies, headache powders, and nerve tonics advertised in the daily and not infrequently in even religious papers. These remedies are often thoughtlessly recommended by clergymen and statesmen who are totally unaware of the often dangerous ingredients of such remedies.

Smallpox, diphtheria, and tuberculosis, all eminently infectious diseases, are treated by so called Christian Scientists as delusions, and no precautions are taken to protect others, not even the innocent children. Instead of joining antivaccination leagues, the American woman should plead for universal vaccination laws. This in view of the fact that in European countries and in the States of the Union where vaccination is compulsory smallpox has almost disappeared, whereas it continues to exist epidemically and occasionally ravages whole districts where universal vaccination is not practiced, that is to say, where it is restricted to those who voluntarily submit themselves to the trifling and harmless operation.

Some well meaning but misguided persons protest against the use of antitoxine in diphtheria because they suppose that its production causes pain to the animal which is used for that purpose, or they go still further, protesting because in experimenting with antitoxine hundreds of innocent little rabbits and guinea pigs have been "tortured." These people call themselves antivivisectionists. Leaving aside that scientific experimenters never purposely torture animals, that the horses from which antitoxine is produced do not suffer, let these good people remember that it is to the experiments on a few hundred guinea pigs and rabbits that the discovery of antitoxine is due, and that in consequence the mortality from diphtheria has been reduced from seventy to seventy-five per cent. to five or six per cent. This means that ninety-four to ninety-five American children are saved out of every one hundred, instead of twenty-five or thirty. Let every American mother remember these facts when she is asked to aid so misguided a mission as one protesting against scientific and humane vivisection.

Tuberculosis, the great white plague, which was formerly regarded as a hopelessly incurable disease, has, thanks to the work of modern scientific medicine, become the most preventable and curable of all infectious chronic diseases. Here, perhaps more than in any other disease, can the American woman be helpful. Let her join every movement which has for its purpose to prevent promiscuous spitting (the main source of the spread of tuberculosis) indoors, in public conveyances, or even on sidewalks. Let her protest against trailing dresses on the sidewalk by example and word, by mouth or pen. Trailing



skirts are filth and disease collectors, they do the scavenger's dirty work and transport not infrequently disease-producing dirt into the homes of their wearers.

Let the American woman join local antituberculosis associations or form such if they do not yet exist in her community. These associations are for the purpose of spreading the knowledge of how to prevent and cure tuberculosis, of looking after the consumptive poor, and inducing noble-minded and generous people to help to provide medical aid, and whenever possible, sanatorium treatment for the pulmonary invalids. It is there that the poor consumptive has the best possible care and that he has often as much as seventy-five to eighty per cent. of chance of absolute and lasting cure.

Another duty of antituberculosis associations is to visit consumptives at their homes and to strive to improve the hygienic condition there, and, while everywhere preaching the need of precaution against the careless deposit of sputum, every member can teach the unduly alarmed people that the careful consumptive is as safe an individual to associate with as any one else, and that phthisiophobia (exaggerated fear of the presence of the consumptive) is cruel and inhumane.

Many women have chosen as a profession that sublime calling of teaching of children. By working hand in hand with the school physician and superintendent, the public school teacher can do more than any one else in the prevention of the spread of many of the contagious children's diseases. School boards, superintendents, and teachers can, by arranging a judicious curriculum, prevent the overtaking of the child's brain and nervous system to the detriment of its physical development. By studying, practicing, and teaching the fundamental rules of the prevention of tuberculosis, such as cleanliness, free ventilation, and love for fresh air and sunlight, and good and healthful food, the public teacher can do more toward the combat of tuberculosis as a disease of the masses than perhaps any other individual.

Alcoholism, the curse of our nation, often the forerunner of tuberculosis and other infectious diseases, more frequently of crime, poverty, and insanity, is a disease well worth while for the woman to study and combat. It must be evident that alcoholism, treated as a disease and not as a crime, cannot be treated by fanatical laws or prosecution, yet women can and should do much toward the possible eradication of this disease of diseases.

Here again she must begin with herself, her own home, her own children, her own husband, her own friends. If she herself is addicted, let her strive to master it; if she does not succeed by will power, let her not have recourse to advertised and mysterious "sure cure" medicines, but consult a competent physician. For let it be known that many of the so called "antialcoholic remedies" have a very large per centage of alcohol, and often morphine or cocaine; this also holds good of many of the so called nerve and stomach remedies. The long continued use of certain patent medicines which are advertised as nonalcoholic has not



infrequently made an habitual drunkard or a person addicted to morphine.

The use of any patent medicine the constituents of which are unknown must always be dangerous, and American women have here a field for reform. Millions of dollars are spent annually for patent medicines, nostrums, and quick remedies, often uselessly, more often producing incalculable and irreparable harm.

Parents should know that unless they master a desire for alcohol they may transmit this morbid longing to their children. Let them be on guard to protect their sons and daughters from such a fate. Let the mother begin with this early. No soothing syrup with unknown ingredients should be used for her babies, no alcohol ever introduced in her household. She should warn her children, as soon as their intelligence permits, of the danger they are exposed to. Let her impress upon her boy that he can be a man, and a true gentleman, though he forever refuses to go into a saloon to be "treated" or to "treat," for alas! it is the "treating" habit among the male population of our country which has made of many a hopeful young man a miserable drunkard.

What shall the women do, poor or rich, whose husband is inclined to the excessive use of alcohol? Let her make her home as attractive as possible, her meals as appetizing as the best cooking can possibly make them; if he desires a glass of wine or of beer with his meals, let her keep these articles at her home. Alcohol diluted in the form of beer or wine, taken in moderate quantities with meals, is not injurious.

Let the American woman support all movements which tend to improve the moral, physical, and intellectual standard of the nation. Let her, with all her might, combat child labor which still disgraces many of our States. Massachusetts, which was for many years the leading State in the Union in the care of its children, has recently lost that proud preeminence. Colorado, Illinois and New York have now better laws concerning child labor. Let the women join rational movements which tend to combat intemperance and excesses of all kinds

Let the woman of culture and refinement teach her less fortunate sister the art of cooking and housekeeping, so that the home of the ordinary laborer, too, may be made more attractive, and the saloon will cease to be a temptation to him. Let the woman of wealth and influence help to create better and healthier tenements for the poor, more parks and playgrounds for the children, healthful places of amusement for old and young, where the honest laboring man may take his wife and children on a Sunday afternoon and partake of nonalcoholic or only light alcoholic drinks with his repast. Thus the saloon and intemperance will lose their charm, and alcoholism and its fearful consequences will gradually disappear.

Broader education, heroic examples, self-sacrifice, much work, and a great deal of devotion are necessary to the American woman if she wishes to do her whole duty toward the health of the nation.—*New York Medical Journal and Philadelphia Medical Journal.*